NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

CIS

Congressional Information Service, Inc
Washington, D.C.

99th Congress
1st Session

COMMITTEE PRINT

S. PRT.
99-11

HEALTH AND EXTENDED WORKLIFE

AN INFORMATION PAPER

PREPARED FOR USE BY THE

SPECIAL COMMITTEE ON AGING
UNITED STATES SENATE

FEBRUARY 1985

This document has been printed for information purposes. It does not offer findings or recommendations by this committee.

U.S. GOVERNMENT PRINTING OFFICE
40-650 O
WASHINGTON : 1985

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, DC 20402

S142-2.

SPECIAL COMMITTEE ON AGING

JOHN HEINZ, Pennsylvania, *Chairman*

PETE V. DOMENICI, New Mexico
NANCY LANDON KASSEBAUM, Kansas
WILLIAM S. COHEN, Maine
LARRY PRESSLER, South Dakota
CHARLES E. GRASSLEY, Iowa
PETE WILSON, California
JOHN W. WARNER, Virginia
DANIEL J. EVANS, Washington

JOHN GLENN, Ohio
LAWTON CHILES, Florida
JOHN MELCHER, Montana
DAVID PRYOR, Arkansas
BILL BRADLEY, New Jersey
QUENTIN N. BURDICK, North Dakota
CHRISTOPHER J. DODD, Connecticut
J. BENNETT JOHNSTON, Louisiana
JEFF BINGAMAN, New Mexico

STEPHEN R. McCONNELL, *Staff Director*
DIANE LIPSEY, *Minority Staff Director*
ROBIN L. KROPP, *Chief Clerk*

PREFACE

Recent trends toward earlier and earlier retirement ages have created a number of problems for American society. Among these: economic stresses on the Social Security and private pension systems; diminished productivity caused by the loss of experienced workers; rising health care costs for employers and the Federal Government; and physical and mental health problems for workers who prematurely forfeit their lifetime work roles for retirement.

One response to these problems is to reverse the early retirement trend. Recent congressional action raising the Social Security retirement age after the turn of the century is one such policy; it is designed to preserve Social Security while extending the worklife. Other policies, such as phased retirement, part-time work, and retiree job banks, are attempts by employers to retain or rehire their older workers.

Underlying these worklife extension policies are serious questions about the health and employability of the older population. Are older Americans healthy enough to perform effectively in most jobs? What health problems do they have? Are there difference between men and women, whites and nonwhites? Are the "young-old" significantly different than the "old-old"? These and other questions are addressed in this paper and a wealth of new data is presented to assist the Congress and employers in making informed decisions about employment and retirement issues.

This information paper was prepared for the committee by Deborah D. Newquist, Senior Staff Associate at the Andrus Gerontology Center, University of Southern California. The project was developed under the auspices of USC's National Policy Center on Employment and Retirement, with funding from the Administration on Aging, U.S. Department of Health and Human Services. Assistance with the NHIS data was provided by Susan Jack of the National Center for Health Statistics.

This document has been prepared for use by the Members of the Special Committee on Aging. The views expressed are those of the author and do not necessarily represent the views of the Special Committee on Aging or the Administration on Aging.

JOHN HEINZ,
Chairman.
JOHN GLENN,
Ranking Minority Member.

CONTENTS

Page
Preface III
Chapter 1. Executive summary 1
Chapter 2. Introduction 3
Chapter 3. Health and the older population:
  The challenge of defining and measuring health 5
  Health status of older persons:
    Standard health measures 8
    Other health measures 48
    Physiological measures 62
  Summary 63
Chapter 4. Health, aging, and work 66
  Health and the aging in the workplace 66
  Research needs 70
Chapter 5. Summary and conclusions 72

APPENDIX

References 75

HEALTH AND EXTENDED WORKLIFE

(By Deborah D. Newquist, Ph.D Candidate, Senior Staff Associate, Andrus Gerontology Center, University of Southern California)

Chapter 1

EXECUTIVE SUMMARY

Retirement age practices are on the threshold of change. We have witnessed a steady decline in labor force participation by older people over the past several decades, but concerted efforts are now being directed toward reversing this trend. For example, the Social Security retirement age has been raised for future cohorts of workers. Policies aimed at reversing early retirement patterns are being considered. Age criteria in personnel policies are being challenged. The total elimination of mandatory retirement is under serious consideration by Congress. Public and private-sector employers have begun to expand employment opportunities for older workers and promote their increased labor force participation. And, older persons themselves have expressed increasing interest in continued labor force participation whether because of financial need or other reasons. Taken as a whole, these trends point to a growing movement to extend the worklife of older persons willing and able to work. "Worklife extension" is a term used to describe these trends; it refers to increasing the labor force participation of older adults, whether through delayed retirements or labor force reentry.

An important theme in discussions of worklife extension is the health of the older population. Employers and policymakers are concerned about the health implications of extended worklife, especially as they relate to issues of labor supply, productivity, employee health costs, and health maintenance.

This report presents information about the health status of older persons as it may relate to extended work lives. The report presents unpublished data on the health status of civilian noninstitutionalized middle-aged and older adults. These data are disaggregated so that narrow age differences within the older population can be observed. The data are presented to reveal the health patterns of the cohorts for whom worklife extension would be most relevant (persons aged 62 to 64 and 65 to 68).

THE FINDINGS

The findings of this study indicate that from the standpoint of worklife extension, the noninstitutionalized older population, and particularly the younger members of that population, are healthier than is widely believed. Health problems are generally more prevalent with advancing age, but up until age 75, this trend is often more limited and gradual than dramatic. In fact, persons aged 65 to 74 were found to have health profiles more like those of persons aged 45 to 64 than of persons aged 75 and over. We should not let a focus on trends obscure the fact that large numbers of older people feel well and are not handicapped or disabled—in other words, a large segment of the older population could be called able-bodied. Some findings which suggest this include:

—The majority of community residents aged 45 to 74 reported no limitations in their activity because of health.

—Eighty-four percent of persons over the age of 45 reported no work disabilities or disabilities in performing their major activity due to health.

—Fewer than 5 percent of persons aged 45 to 74 reported mobility limitations due to a chronic condition.

—Over three-quarters of persons 45 and over reported no hospitalization episodes during a 1-year period.

—More than two-thirds of persons over 45 rated their health as good or excellent.

Although most older persons report no functional limitations, a sizable minority do experience some health decrements. Thirty-one percent of persons over 45 reported some level of disability; 10 percent reported that they were unable to work or perform their major activity because of health. For this latter group, worklife extension may not be a viable alternative to retirement, and employment policies should seek to protect these individuals from financial hardship.

There is another category of workers who are revealed in this report: persons who experience *partial* work disabilities. These are persons who are limited in the kind or amount of work they can perform, but are not incapacitated for work. They are conditionally disabled. Sixteen percent of persons over 45 reported these types of limitations. For these persons, worklife extension may depend upon their ability to find, obtain, or retain jobs. The extent to which their health problems become work disabilities, then rests in part on the economy, on discrimination in the workplace, and on other structural factors—in short, it depends upon the availability and accessibility of jobs.

The report also compares the experiences of men and women and minorities and whites. It shows that in numerous cases women reported more health problems than men, regardless of age. Similarly, older minorities reported health problems more than older whites. Older blacks, in particular, evidenced health disadvantages.

Finally, the following issue areas were identified through consideration of the data from an extended worklife perspective: the need to develop an index for rating the work potential of the older population which would address issues of employability and placeability; the need to address the problem of conditional disability; the need to identify and consider the needs of groups at risk of disability; and the opportunity for government to join with business in efforts to promote and maintain the health and functioning of workers.

Chapter 2

INTRODUCTION

Retirement age practices are on the threshold of change. Whereas over the past several decades we have witnessed a steady decline in labor force participation by older people, encouraged some say by public and private retirement policies and practices, concerted efforts are now being directed toward reversing this trend. These efforts can be seen in several arenas. The Social Security retirement age has been raised for future cohorts of workers. Policies aimed at reversing early retirement patterns are being considered. Age criteria in personnel policies are being challenged, including challenges to BFOQ's (bona fide occupational qualifications) through age discrimination suits. The total elimination of mandatory retirement is being promoted. In addition, both the public and private sectors have undertaken steps to expand employment opportunities for older workers and promote their increased labor force participation. And finally, older persons themselves have expressed increasing interest in continued labor force participation whether because of financial need or other reasons (see Robinson and Sanford, 1982). Taken as a whole, these trends point to a growing movement to extend the worklife of older persons willing and able to work. "Worklife extension" is a term used to describe these trends; it refers to increasing the labor force participation of older adults, whether through delayed retirements or labor force reentry on the parts of the retired.

A recurrent theme raised in discussions of worklife extension is the health of the older population. Employers and policymakers are concerned about the health implications of extended worklife as they relate to issues of labor supply, productivity, employee health costs, and health maintenance. Public and private-sector decisionmakers question whether the health of older people prevents them from working and whether health problems disincline some older people from wanting to work. Decisionmakers wonder if health problems reduce the productivity of older workers; they ask whether older persons can perform at acceptable levels if indeed they do work. Employers and government leaders raise questions about the health problems of older people and about whether these problems result in increased health care costs to employers. Finally, leaders are concerned about the potential impact of continued work on the health of the older population: does continued work potentially threaten the level of health of older people or does it help them to maintain good health?

Certainly, health is only one of several variables which affect the supply of workers, their levels of productivity, and their utilization of health services. In addition, factors other than work influence an individual's level of health. Nevertheless, when worklife extension issues are raised, health is a major concern often voiced by societal leaders. It is that concern which gives rise to this report. In order to evaluate the health implications of extended worklife, we need first to know more about the health status of the older population. Informed decisionmaking can only proceed from this base.

Various data on the health status of older people are available to help in addressing these concerns. What is lacking, however, is an analysis of these data from a worklife extension perspective. Employers and policymakers need to know about the health status of older people reported in a manner relevant to their particular needs.

The purpose of this paper is twofold: (1) To present information about the health status of older people based on a synthesis of data derived from a variety of sources; and (2) to analyze and discuss the implications of this information for worklife extension considerations. The paper is divided into three major sections: Chapter 3 presents current data on the health status of noninstitutionalized civilian middle-aged and older people analyzed from a worklife extension perspective; chapter 4 discusses these health data in regard to worklife extension and raises issues for further consideration; and chapter 5 presents a summary of the findings and conclusions.

Chapter 3

HEALTH AND THE OLDER POPULATION

THE CHALLENGE OF DEFINING AND MEASURING HEALTH

Good health is a universal goal of humankind. Despite ubiquitous concerns about health however, the definition of health continues to elude us. What do we mean when we evaluate ourselves, other individuals or population groups as healthy or not? How should health be measured? How can we assess whether or not the health of an individual or population has improved?

Investigators have wrestled with the problem of defining health and have through these efforts offered various definitions. These range from the global definition proposed by the World Health Organization: "Health is a state of complete physical, mental, and social well-being, and not merely the absence of diseases and infirmity" (World Health Organization, 1958); to the most rudimentary definition implicit in mortality measures of populations (Jette, 1980). Siegrist (1971) defined health as "not simply the absence of disease: it is something positive, a joyful attitude toward life; and a cheerful acceptance of the responsibilities that life puts on the individual" (page 100). In discussing health in old age, Atchley (1980) employs the following definition: "It refers not merely to the absence of disease or disability, but also to more positive things, such as mental, physical, and social well-being. It is more useful to look at health as a continuum" (page 108). This continuum places good health opposite poor health and the absence of disease or impairment opposite death due to illness (figure 1).

Figure 1. Stages of the Health Continuum

Good Health							Poor Health
Absence of disease or impairment	Presence of a condition	Seeks treatment	Restricted activity	Restricted in major activity	Unable to engage in major activity	Institutionalized	Death

Source: Atchley, 1972:114.

A fundamental criterion of good health in all of these definitions (with the exception of definitions implicit in mortality measures) is the absence of disease, and secondarily, the absence of disability or impairment. Furthermore, these definitions go further to assert that good health is more than the mere absence of disease. Viewing health in this way is characteristic of "positive health" definitions according to Sullivan (1966) who states: "Positive health * * * generally implies existence of identifiable levels of health among those free of apparent morbidity." (Page 2.)

Unfortunately, no one has yet developed an acceptable way to operationalize and measure positive health. Instead, measurements of health commonly resort to an indirect, negative definition of health and hence seek to determine the absence of good health as reflected in the mortality and morbidity levels of a given population. Negative health approaches are also, with their focus on problems, more readily useful in health planning and programming activities. They help to identify areas of need and indicate where and how resources should be allocated.

It is only recently that the health status of the total population has been a subject of extensive study. Historically, the health of the population was assessed by means of mortality rates alone. Death rates, infant mortality rates and life expectancy were the indices used to measure levels of health. The assumption underlying the use of these measures was that a reduction in mortality reflected a reduction in morbidity and thus, improved health as well. While this assumption is true to some extent, mortality measures shed only dim light on questions concerning the living. They reveal little about the incidence and prevalence of illnesses and about the impact of illnesses on functioning—concerns of increasing importance (Sullivan, 1966).

The Survey of Sickness, initiated in 1943 and conducted annually until 1952 in the United Kingdom in an attempt to monitor the health of the population under wartime stress, was the first attempt ever to gather annual morbidity data representative of a national population (Great Britain General Register Office, 1957; Slater, 1946; Sullivan, 1966). The success of this survey demonstrated the feasibility of expanding national health measures beyond mortality rates.

It was not until July 1957, with the launching of the Health Interview Survey, that the United States undertook a similar endeavor. The Health Interview Survey, the Health Examination Survey launched full-scale in April 1961, and the Health Records Survey inaugurated in April 1962, form the tripart National Health Survey authorized by Congress in the National Health Survey Act of 1956. The purpose of these surveys is to conduct a continuing surveillance of illness and disability in the U.S. population. Prior to the passage of this act and the inauguration of the National Health Survey, information about morbidity in the population was limited to ad hoc reports derived from specialized, localized health studies; physicians' reports of communicable diseases required by State laws; and various reports from hospitals, insurance companies, and other health organizations. No ongoing, uniform, valid measure of the Nation's health level, beyond that revealed by mortality statistics, was available (National Center for Health Statistics, 1963).

Much progress has since been made in the conceptualization and measurement of the complex phenomenon we call health. We no longer rely solely on mortality rates or ad hoc reports. Today, standard measures of health, as used in health studies, focus on (1) mortality; (2) the prevalence and incidence of disease (both chronic and acute), impairments, and disabilities or functional limitations (both long and short term); and (3) self-perceptions of health. In addition, other measures are often employed to illuminate further the levels of health of the population. These include reports of retirements due to health and utilization of medical services. Ongoing research in the biology and physiology of aging also reveals information pertinent to considerations of the health of the elderly population. Recent data derived through these various measures will be reviewed in regard to the noninstitutionalized middle-aged and older population in the section to follow.[1] Mortality trends among the older population will be omitted from this examination since our concern here is with employment implications, and hence, with morbidity and disability.

HEALTH STATUS OF OLDER PERSONS

Standard Health Measures

PRESENCE/ABSENCE OF DISEASE

Acute Conditions

According to the National Center for Health Statistics (Jack, 1981), acute conditions are defined as illness episodes having these three characteristics: They are caused by diseases not considered to be chronic; they last less than 3 months; and they cause the afflicted individual either to seek medical care or alter his or her usual activities. Illnesses not accompanied by some behavioral changes are excluded in this definition and thus are not recorded by the National Center. In addition, only acute conditions with onset in the 2 weeks preceding the health interview are used in estimating incidence.

A look at table 1 shows incidence rates of acute conditions for the middle-aged and older population. As can be seen, *the incidence of acute conditions is greater among persons aged 45 to 61 than among persons aged 62-plus.* This pattern is particularly apparent for injuries (with the exception of the 75-plus age group), infective and parasitic diseases, and respiratory conditions.

---

[1] Much of the data on the health of the population is cross-sectional data. Cross-sectional studies provide observations on differences between individuals of various ages. These differences cannot be taken as evidence of the effects of aging, however. The reader should be aware of this methodological issue when reviewing the discussion which follows.

A greater incidence rate is found among women in all age groups compared to men (table 2). This could be because women actually experience more illnesses than men or it may be that they respond behaviorally more often to illnesses (e.g., utilize medical care) and thus are more often recorded by this measure. The exact cause for this finding has not been determined. As discussed later, however, women do have somewhat higher rates of physician utilization than men for all age groups.

Whites aged 45 to 64 report a greater incidence of acute conditions than their black age peers (table 3). Blacks aged 65 and over, however, report more acute conditions than whites of the same age. This is particularly the case with upper respiratory conditions.

Chronic Conditions

Chronic conditions are defined by the National Center for Health Statistics (Jack, 1981) as either: (1) Illness experiences which last more than 3 months; or (2) the presence of one or more of the following conditions which are always classified as chronic regardless of the recency of their onset:

Tuberculosis.
Neoplasms (benign and malignant).
Diseases of the thyroid gland.
Diabetes.
Gout.
Psychoses and certain other mental disorders.
Multiple sclerosis and certain other diseases of the central nervous system.
Certain diseases and conditions of the eye.
Certain diseases of the circulatory system (including rheumatic fever, hypertension, stroke, and all heart conditions).
Emphysema, asthma, hay fever, and bronchiectasis.
Ulcers and certain other diseases of the esophagus, stomach, and duodenum.
Hernia of abdominal cavity (includes rupture).
Gastroenteritis and colitis (with exceptions).
Calculus of kidney, ureter, and other parts of the urinary system.
Diseases of the prostate.
Chronic cystic diseases of the breast.
Eczema and certain other dermatitis.
Arthritis and rheumatism.
Cyst of the bone (except jaw).
All congenital anomalies.

The 10 chronic conditions most commonly reported by persons aged 45 and over are shown in table 4. *With the exception of respiratory conditions (sinusitis and hayfever), it can be seen that chronic diseases are more prevalent among persons aged 65 and older compared to those aged 45 to 64.* These conditions are generally experienced more among the "old-old" (those 75-plus) than the "young-old" (65 to 74), however.

Table 2.
Incidence of Acute Conditions Per 100 Persons Per Year, by Age and Sex,
for Persons 45 Years and Over: United States, 1978-79*

Condition	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	11,039	7,099	2,656	2,978	3,440	3,087
	Number of Conditions Per 100 Persons Per Year						
All Acute Conditions	116.0	134.7	116.9	98.4	92.7	105.2	96.9
Infective and Parasitic Conditions	9.5	13.1	9.4	**7.5	**4.2	**6.4	**7.0
Respiratory Conditions	57.7	64.7	65.1	50.8	43.4	46.7	41.2
Upper Respiratory	27.0	28.5	32.4	27.5	18.5	23.3	21.0
Influenza	25.8	32.4	27.1	26.8	18.2	15.7	16.6
Other Respiratory	5.0	3.8	5.6	**4.6	**6.6	**7.6	**3.6
Digestive Conditions	6.6	8.0	5.6	**6.5	**4.9	**5.0	**7.6
Injuries	23.5	29.4	22.9	15.3	21.2	16.3	21.5
All Other Acute Conditions	18.7	19.5	14.0	**10.2	19.1	30.8	19.5
Females (Population in the Thousands)	36,237	11,817	7,829	3,030	3,824	4,521	5,216
	Number of Conditions Per 100 Persons Per Year						
All Acute Conditions	137.8	153.2	149.4	111.0	126.6	120.7	124.3
Infective and Parasitic Conditions	10.6	12.4	15.1	**4.9	**8.3	7.9	7.2
Respiratory Conditions	67.3	76.5	76.6	60.4	62.6	52.2	53.1
Upper Respiratory	31.7	34.7	32.9	27.4	34.1	26.1	29.0
Influenza	30.1	38.5	36.5	29.1	20.9	21.8	15.8
Other Respiratory	5.5	3.2	7.3	**3.9	**7.6	**4.2	8.3
Digestive Conditions	8.7	11.0	7.4	**5.6	**3.6	10.4	9.5
Injuries	24.8	27.4	22.2	20.6	22.6	21.7	29.7
All Other Acute Conditions	26.4	25.9	27.9	19.4	29.5	28.5	24.9

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 3.
Incidence of Acute Conditions Per 100 Persons Per Year, by Age and Race, for Persons 45 Years and Over: United States, 1981

Condition	Total 45 Years and Over	45-64 Years	65 Years and Over
White (Population in the Thousands)	61,632	39,167	22,465
Number of Conditions Per 100 Persons Per Year			
All Acute Conditions	120.3	128.8	105.5
Infective and Parasitic Conditions	8.1	9.0	6.5
Upper Respiratory Conditions	27.3	29.3	23.8
Influenza	34.1	40.7	22.6
Other Respiratory Conditions	5.2	4.3	6.6
Digestive Conditions	4.8	4.3	5.6
Injuries	21.3	22.3	19.6
All Other Acute Conditions	19.5	18.8	20.8
Black (Population in the Thousands)	6,242	4,173	2,069
Number of Conditions Per 100 Persons Per Year			
All Acute Conditions	120.6	123.0	115.7
Infective and Parasitic Conditions	*7.7	*9.0	*5.1
Upper Respiratory Conditions	26.7	19.7	40.9
Influenza	31.9	32.6	30.4
Other Respiratory Conditions	*5.4	*6.9	*2.5
Digestive Conditions	*8.3	*10.9	*3.3
Injuries	18.9	21.0	*14.5
All Other Acute Conditions	21.6	22.9	*19.0
Other (Population in the Thousands)	1,153	839	315
Number of Conditions Per 100 Persons Per Year			
All Acute Conditions	137.3	121.9	*177.8
Infective and Parasitic Conditions	---	---	---
Upper Respiratory Conditions	*42.8	*37.5	*56.5
Influenza	*27.8	*30.0	*21.6
Other Respiratory Conditions	---	---	---
Digestive Conditions	*4.7	*6.4	---
Injuries	*36.4	*18.5	*84.1
All Other Acute Conditions	*25.8	*29.4	*15.6

* Relative standard error is more than 30%.

Source: National Center for Health Statistics, unpublished data, 1982.

The three conditions most commonly reported among persons aged 65 and over are arthritis, hypertensive disease, and heart conditions. Among those aged 45 to 64, the three most prevalent conditions reported are arthritis, hypertensive disease, and chronic sinusitis.

Diseases of the circulatory system dominate the list of most prevalent reported conditions. Of the 10 most prevalent conditions reported by persons aged 45 and older, five are conditions involving the circulatory system. These are hypertensive disease, heart conditions, hemorrhoids, varicose veins, and arteriosclerosis.

Observation of the age groups 55 to 64 and 65 to 74, those for whom worklife extension is more relevant, reveals that not more than about 31 percent of those aged 55 to 64 and 42 percent of those aged 65 to 74 report arthritis, not more than 26 percent and 37 percent respectively have known hypertensive disease, and not more than 17 percent and 26 percent have known heart conditions.

Ten percent or fewer of both age groups report each of the remaining conditions, with the exception of chronic sinusitis. Of course individuals may experience more than one chronic condition, and this is often the case among the aged (Kovar, 1977). These data do not represent an unduplicated count of persons experiencing the various conditions. In addition, these data do not indicate the seriousness of the conditions in terms of their functional consequences; their medical requirements; or their impact on life expectancy.

For the total population over age 45, older women report higher prevalence rates for each of the ten conditions, with the exception of hernias and arteriosclerosis (table 5). In other words, older women report more arthritis, hypertensive disease, heart conditions, chronic sinusitis, diabetes, hemorrhoids, varicose veins, and hayfever compared to older men.

Table 5.
Ten Most Prevalent Selected Chronic Conditions, by Age and Sex, for Persons 45 Years and Over: United States, 1979

Chronic Condition	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Males (Population in the Thousands)	30,390	20,773	10,991	9,782	9,617	6,494	3,122
	Number of Conditions Per 1,000 Persons						
Arthritis	241.0	188.4	150.4	231.0	354.6	335.2	394.9
Hypertensive Disease	238.3	202.9	157.6	253.7	315.0	307.4	330.9
Heart Conditions	174.2	131.8	90.4	178.3	265.7	255.2	288.0
Chronic Sinusitis	155.0	164.1	164.3	163.9	135.4	137.5	131.0
Diabetes	61.6	56.0	51.4	61.2	73.7	68.2	85.2
Hemorrhoids	57.5	59.9	71.7	46.5	52.3	55.4	*45.8
Varicose Veins	27.6	23.3	*18.4	28.8	36.9	*33.0	*45.2
Hayfever, without asthma (includes upper respiratory allergy)	54.1	58.5	60.1	56.6	44.6	52.7	*27.9
Arteriosclerosis	57.9	28.5	*16.6	41.8	121.5	99.5	167.2
Hernia of Abdominal Cavity	56.6	49.8	34.8	66.6	71.3	65.4	83.9
Females (Population in the Thousands)	36,409	22,684	11,752	10,931	13,726	8,435	5,291
	Number of Conditions Per 1,000 Persons						
Arthritis	384.2	311.5	255.3	372.1	504.4	477.8	546.8
Hypertensive Disease	303.9	225.0	181.8	271.6	434.2	417.2	461.5
Heart Conditions	184.0	125.5	95.8	157.4	280.6	259.0	314.9
Chronic Sinusitis	196.7	212.2	233.3	189.6	171.1	175.8	163.7
Diabetes	68.9	59.7	52.2	67.8	83.9	88.6	76.5
Hemorrhoids	71.7	69.1	77.3	60.5	75.8	73.1	80.1
Varicose Veins	95.6	77.0	76.8	77.3	126.3	128.0	123.6
Hayfever, without asthma (includes upper respiratory allergy)	70.0	79.2	85.1	72.8	54.8	71.7	*27.6
Arteriosclerosis	56.6	15.3	*12.8	*17.9	125.0	103.5	159.3
Hernia of Abdominal Cavity	39.1	28.7	*12.6	45.9	56.5	59.3	52.0

*Relative standard error is more than 30%.

Source: National Center for Health Statistics, unpublished data, 1982.

Table 1.
Incidence of Acute Conditions Per 100 Persons Per Year, by Age for Persons 45 Years and Over: United States, 1978-79*

Condition	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	66,495	22,856	14,888	5,686	6,803	7,961	8,303
	Number of Conditions Per 100 Persons Per Year						
All Acute Conditions	127.9	144.3	134.0	105.1	111.7	114.0	114.1
Infective and Parasitic Conditions	10.1	12.8	12.4	6.1	6.5	7.2	7.1
Respiratory Conditions	62.9	70.8	71.2	59.7	54.2	49.8	48.7
Upper Respiratory	29.6	31.7	32.6	27.5	27.3	24.9	26.0
Influenza	28.1	35.6	32.0	28.0	19.7	19.2	16.1
Other Respiratory	5.3	3.5	6.5	**4.2	7.2	5.7	6.5
Digestive Conditions	7.8	9.5	6.5	**6.0	**4.1	8.1	8.8
Injuries	24.2	28.4	22.5	18.1	22.0	19.4	26.7
All Other Acute Conditions	22.9	22.8	21.3	15.1	25.0	29.5	22.9

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 4.
Ten Most Prevalent Reported Selected Chronic Conditions, by Age, for Persons 45 Years and Over: United States, 1979

Chronic Condition	Total 45 Years and Over	45–64 Years	45–54 Years	55–64 Years	65 Years and Over	65–74 Years	75 Years and Over
Population in the Thousands	66,800	43,457	22,744	20,713	23,343	14,929	8,414
	Number of Conditions Per 1,000 Persons						
Arthritis	319.1	252.7	204.6	305.5	442.7	415.8	490.4
Hypertensive Disease	274.1	214.4	170.1	263.2	385.1	369.3	413.0
Heart Conditions	179.5	128.5	93.2	167.3	274.4	257.4	304.7
Chronic Sinusitis	177.8	189.2	200.0	177.4	156.4	159.2	151.7
Diabetes	65.6	57.9	51.8	64.7	79.7	79.7	79.7
Hemorrhoids	65.2	64.7	74.6	53.9	66.1	65.4	67.4
Varicose Veins	64.7	51.3	48.5	54.4	89.4	86.7	94.4
Hayfever, without asthma, (includes upper respiratory allergy)	62.8	69.3	73.0	65.2	50.6	63.4	27.8
Arteriosclerosis	57.2	21.6	14.6	29.2	123.5	101.7	162.2
Hernia of Abdominal Cavity	47.1	38.7	23.3	55.6	62.6	61.9	63.8

Source: National Center for Health Statistics, unpublished data, 1982.

PHYSICAL IMPAIRMENTS

Physical impairments are usually permanent and static in nature. In this way they differ from chronic or acute diseases. The National Center for Health Statistics defines impairments as " * * * chronic or permanent defects, usually static in nature, that result from disease, injury, or congenital malformation. They represent decrease or loss of ability to perform various functions, particularly those of the musculoskeletal system and the sense organs." (Jack, 1981: 50.)

The prevalence rates among older persons of seven common physical impairments are reported below. These include visual impairments, hearing impairments, the absence of extremities or parts of extremities, paralysis, and deformities or orthopedic impairments of the back, upper extremities, or lower extremities. A visual impairment is defined as an inability to read ordinary newspaper print with the aid of glasses, the absence of useful vision in either eye, or blindness in one or both eyes (Feller, 1981). This definition excludes persons who have visual defects which are correctable with glasses. Hearing impairments are defined as deafness, hearing loss (complete or partial), or hearing impairments involving one or both ears (Feller, 1981). This definition includes persons who have hearing defects which are correctable with hearing aids. The definitions of the other types of impairments discussed below are self-explanatory.

The prevalence of physical impairments among older adults is shown in table 6. Impairments are more common among persons aged 65 and over than among persons aged 45 to 64. Moreover, an increase in prevalence rates is associated with advancing age for most impairments.

The pattern of impairments varies by age group. *The most prevalent impairments among the middle-aged (45 to 54, 55 to 64) and the young-old (65 to 74), are hearing difficulties, followed by problems of the back, and then visual impairments.* For the old-old (75-plus), the most prevalent impairments are first hearing, then vision, and then back problems.

How prevalent are the different impairments among the older population? As can be seen in table 6, *no single impairment is experienced by more than 28 percent of older adults.* The most prevalent type of impairment among persons aged 65-plus, hearing impairments, is reported by not more than about 28 percent of the total aged population (65-plus), and about 23 percent of the young-old group (65 to 74). Any one person may experience more than one impariment however.

Men and women report different impairment patterns (table 7). Hearing impairments are notably more common among men than women. Men also report more visual impairments. On the other hand, women are more likely than men to experience deformities or orthopedic problems of the back and of the lower extremities.

Table 7.
Prevalence of Selected Physical Impairments, by Age and Sex, for Persons 45 Years and Over: United States, 1979.

Physical Impairment	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Males (Population in the Thousands)	30,390	20,773	10,991	9,782	9,617	6,494	3,122
	Number of Conditions Per 1,000 Persons						
Visual Impairments	88.7	74.4	67.6	82.1	119.7	85.0	191.1
Hearing Impairments	204.6	147.8	130.7	167.0	327.2	290.0	404.9
Absense of Extremities or Parts of Extremities (excludes tips of fingers or toes only)	36.5	34.0	24.6	44.6	42.0	41.4	*43.2
Paralysis, Complete or Partial, of Extremities or Parts of Extremities	11.9	*8.2	*7.0	*9.5	*20.1	*21.4	*17.3
Deformities or Orthopedic Impairments of:							
Back	73.3	71.8	67.4	76.7	76.5	81.8	*65.7
Upper Extremities or Parts of Upper Extremities	27.2	25.6	23.3	28.2	30.7	35.3	*21.1
Lower Extremities or Parts of Lower Extremities	40.1	36.4	32.3	41.0	48.1	44.8	*55.1
Females (Population in the Thousands)	36,409	22,684	11,752	10,931	13,726	8,435	5,291
	Number of Conditions Per 1,000 Persons						
Visual Impairments	71.4	43.4	26.2	61.9	117.6	81.4	175.4
Hearing Impairments	152.1	93.1	63.1	125.4	249.6	177.9	363.8
Absence of Extremities or Parts of Extremities (excludes tips of fingers or toes only)	8.9	*6.8	*8.8	*4.6	*12.3	*12.3	*12.3
Paralysis, Complete or Partial, of Extremities or Parts of Extremities	10.1	*5.2	*1.9	*8.8	18.3	*22.2	*12.1
Deformities or Orthopedic Impairments of:							
Back	89.1	77.1	76.3	77.9	109.0	114.0	100.9
Upper Extremities or Parts of Upper Extremities	19.4	18.1	*16.8	*19.5	21.6	*15.3	*31.6
Lower Extremities or Parts of Lower Extremities	44.8	34.6	31.5	37.8	61.6	57.0	69.0

*Relative standard error is more than 30%.

Source: National Center for Health Statistics, unpublished data, 1982.

The impact of impairments on functioning varies depending upon the nature of the impairment and its level of severity. *In general, paralysis and severe visual impairments are more disabling than impairments of the back or hearing difficulties.* For example, in 1977, 37 percent of severe visual impairments caused limitations in activity and an average of 23 restricted activity days per condition per year (Feller, 1981). In contrast, only 5 percent of hearing impairments caused activity limitations in that year and their impact averaged less than one restricted activity day per condition per year.

About one-quarter of back impairments caused limitations of activity in 1977 (Feller, 1981). Paralysis, whether complete or partial, had more severe impacts, causing activity limitations in three-fifths (58 percent) of the people who experienced this condition. Absence of or impairments to upper extremities generally resulted in less severe functional impacts than did problems associated with lower extremities.

Of those persons who reported experiencing an impairment in 1977, more persons who had a back problem were bothered by it (92 percent) than generally was the case among persons who experienced hearing or vision problems (77 and 74 percent were bothered respectively). Orthopedic problems of the lower extremities were more bothersome (89 percent of afflicted were bothered) than were orthopedic problems of the upper extremities (73 percent of afflicted were bothered) (Feller, 1981).

FUNCTIONAL IMPAIRMENTS

Another way to assess the health of a population is to determine as accurately as possible the extent to which the population members are functionally impaired because of the health problems they experience. Rather than focus on the presence or absence of conditions, these measures seek to assess the *impact* of the conditions; it is the impact on functional ability which is deemed signficant and relevant, as revealing the most pertinent information about the level of the population's health.

Several measures of health can be used to examine functional ability. These include measures of activity limitations, work disability, mobility limitations, and sick days, defined broadly.

Chronic Activity Limitations

The National Center for Health Statistics (1964) measures activity limitations using a four-level measure of chronic impairment. Persons are asked if a chronic condition prevents them from performing their usual or major activity (for nonstudent adults this would be housework or employment); limits the amount or kind of major activity they can perform; limits their activities in areas other than their major activity (examples of these activities would be shopping, club or church attendance, etc.); or does not limit their activities.

In 1978–79, the majority (69 percent) of community residents over the age of 45 reported no limitation in their activity because of a chronic condition (table 8). If this age group is disaggregated, it can be seen that this pattern holds for all the age groups under age 75. In other words, the majority of community residents aged 45 to 74 within each age subcategory reported no chronic activity limitation.

Only about 10 percent of the 45-plus population reported that they were unable to work or perform housework because of a chronic condition. Considerable variation exists within this population however. Disabilities were more common among older compared to younger persons. For example, whereas almost 22 percent of the 75-plus population reported that they could not perform their major activity because of their health, only about 4 percent of the 45- to 54-year-old population reported that level of disability. *It is interesting from the standpoint of worklife extension concerns that almost equal percentages of 62- to 64- and 65- to 68-year-olds (12 and 12.7 percent respectively) reported that they were unable to perform their major activity due to health.*

More older people of all ages reported partial work disabilities (defined as limited in amount or kind of major activity) than full disabilities (defined as unable to perform major acitivity). Sixteen percent of the total 45-plus population reported limitations in the amount or kind of major activity they could perform. Again, the incidence of partial work disabilities, like that of total disabilities, was associated with age.

The pattern of activity limitations differed between the sexes (table 9). More men than women over age 45 reported full disabilities, and this was true for each age subcategory. More women than men, on the other hand, reported partial work disabilities. Also, the existence of full disability among men was greater for older age groups. Among women, the existence of full disability remained low and fairly uniform for the age groups under 75. The experience of partial disability was associated with age for women, however.

When comparing the disability experience of men to women it should be borne in mind that the "usual" activity patterns for men and women may vary. Thus, a different standard may be used by men in judging their activity limitations than is used by women in assessing theirs. This potential difference could affect the patterns described here.

The pattern of activity limitations was similar for older whites and Hispanics (table 10). Approximately three-quarters of the 45 to 64-year-old whites and Hispanics reported no limitation in activity due to a chronic condition. Among those aged 65 and over, a little over one-half of both whites and Hispanics reported no activity limitations.

Table 9.
Chronic Activity Limitation, by Age and Sex,
for Persons 45 Years and Over: United States, 1978-1979[*]

Activity Limitation	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	11,039	7,059	2,656	2,978	3,440	3,087
	Percent Distribution						
No Activity Limitation	67.7	81.2	70.8	62.6	57.7	51.4	45.1
Limited But Not in Major Activity	5.0	4.7	5.2	5.0	4.8	5.4	5.2
Limited in Amount or Kind of Major Activity	11.1	8.3	10.2	11.8	14.1	15.6	14.8
Unable to Perform Major Activity	16.2	5.9	13.8	20.7	23.4	27.6	35.0
Total[**]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females (Population in the Thousands)	36,237	11,817	7,829	3,030	3,824	4,521	5,216
	Percent Distribution						
No Activity Limitation	69.4	81.1	73.4	70.2	63.9	60.9	47.8
Limited But Not in Major Activity	6.4	5.0	6.1	6.4	7.3	7.5	8.7
Limited in Amount or Kind of Major Activity	19.5	12.2	17.6	18.9	24.4	26.3	29.6
Unable to Perform Major Activity	4.7	1.7	3.0	4.5	4.3	5.4	13.9
Total[**]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[*] Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.

[**] Total may not add to 100% due to rounding.

Source: National Center for Health Statistics, unpublished data, 1982.

Table 10.
Chronic Activity Limitation, by Age and Ethnicity,
for Persons 45 Years and Over: United States, 1978-80*

Activity Limitation	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic) (Population in the Thousands)	173,481	36,837	20,443
	Percent Distribution		
No Activity Limitation	85.3	76.9	55.7
Limited in Activity	14.7	23.1	44.3
Limited in Major Activity	10.8	17.8	37.6
Total**	100.0	100.0	100.0
Black (Non-Hispanic) (Population in the Thousands)	24,863	4,012	1,986
	Percent Distribution		
No Activity Limitation	84.7	67.8	42.8
Limited in Activity	15.3	32.2	57.2
Limited in Major Activity	12.4	27.3	50.7
Total**	100.0	100.0	100.0
Hispanic (Population in the Thousands)	14,298	2,076	748
	Percent Distribution		
No Activity Limitation	88.9	75.9	52.5
Limited in Activity	11.1	24.1	47.5
Limited in Major Activity	8.3	19.1	42.4
Total**	100.0	100.0	100.0

* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.

** Total may not add to 100% due to rounding.

Source: National Center for Health Statistics, unpublished data, 1982.

Table 6.
Prevalence of Selected Physical Impairments, by Age, for Persons 45 Years and Over: United States, 1979

Impairment	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Population in the Thousands	66,800	43,457	22,744	20,713	23,343	14,929	8,414
	Number of Impairments Per 1,000 Persons						
Visual Impairments	79.3	58.2	46.2	71.5	118.5	83.0	181.4
Hearing Impairments	176.0	119.2	95.7	145.1	281.6	226.7	379.0
Absence of Extremities or Parts of Extremities (excludes tips of fingers or toes only)	21.5	19.8	16.5	23.4	24.5	25.0	*23.8
Paralysis, Complete or Partial, of Extremities or Parts of Extremities	10.9	6.6	*4.4	*9.1	19.0	21.8	*14.0
Deformities or Orthopedic Impairments of:							
Back	81.9	74.5	72.0	77.3	95.6	100.0	87.9
Upper Extremities or Parts of Upper Extremities	23.0	21.7	20.0	23.6	25.3	24.0	27.7
Lower Extremities or Parts of Lower Extremities	42.6	35.4	31.9	39.3	56.1	51.7	63.8

*Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 8.
Chronic Activity Limitation, by Age, for Persons 45 Years and Over: United States, 1978-79*

Activity Limitation	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	66,495	22,856	14,888	5,686	6,803	7,961	8,303
	Percent Distribution						
No Limitation of Activity	68.6	81.2	72.2	66.6	61.2	56.8	46.8
Limited But Not in Major Activity	5.8	4.8	5.7	5.7	6.2	6.6	7.4
Limited in Amount or Kind of Major Activity	15.7	10.3	14.1	15.6	19.9	21.7	24.1
Unable to Perform Major Activity	9.9	3.7	8.1	12.0	12.7	15.0	21.8
Total**	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Total may not add to 100% due to rounding.
Source: National Center for Health Statistics, unpublished data, 1982.

The pattern for older blacks differed. Regardless of age, greater percentages of blacks over 45 reported activity limitations compared to their white and Hispanic age peers. Among the 65-plus group, in fact, the majority of older blacks reported chronic activity limitations. Furthermore, the majority of blacks over 65 reported that they were limited in their major activity; in other words, the majority reported full work disabilities. This compares to 38 percent of the whites and 42 percent of the Hispanics aged 65-plus who reported full work disabilities.

As noted above, assessments of disability depend upon the standards against which activity limitations are measured. Since usual types of work may vary by ethnic group, this difference could influence their reports of disability.

Work Disability

In 1978, the Social Security Administration conducted a study of disability within the noninstitutionalized civilian population who were "working-aged" (ages 18 to 64) (Lando, Cutler, and Gamber, 1982). The exclusion of persons aged 65 and over from this survey obviously limits its usefulness for worklife extension considerations. Nevertheless, the 1978 Disability Survey is a major work in the area and provides valuable information about the prevalence of disability among the mature population.[2]

The 1978 Disability Survey classified persons into four categories based on the extent of work limitation they reported because of their health. Persons who reported that they were unable to work altogether or unable to work regularly were classified as "severely disabled." Those who were able to work regularly but unable to do the same work as before the onset of disability or were unable to work full time were classified as "occupationally disabled." Persons who could work full time, regularly, and at the same work but with limitations in the amount or kind of work they could perform were classified as having "secondary work limitations." Lastly, persons with no work limitations due to health were defined as "not disabled."

Findings from this survey show that the majority of persons aged 45 to 64 experienced no work disabilities in 1978 (table 11). *Over three-quarters of persons aged 45 to 54 and almost two-thirds of those aged 55 to 64 reported no work disabilities.* Other findings are that work disabilities were associated with age. A greater percentage of 55- to 64-year-olds (37 percent) than 45- to 54-year-olds (24 percent) reported work disabilities. Also, persons aged 55 to 64 reported severe disabilities more often than partial disabilities (defined as either occupational or secondary limitations), while slightly more persons aged 45 to 54 reported partial disabilities than severe disabilities.

---

[2] This study follows earlier surveys of the disabled conducted by the Social Security Administration in 1966 and 1972.

Table 11.
Work Disability, by Age, for Persons Aged 45-64:
United States, Summer 1978

Work Disability	45-54 Years	55-64 Years
Total Number	23,664,553	20,293,522
Not Disabled	17,936,697	12,788,727
All Disabled	5,727,857	7,504,794
Severe	2,668,751	5,046,018
Occupational	1,430,132	1,178,039
Secondary Limitation	1,628,974	1,280,737
	Percent Distribution	
Total$	100.0	100.0
Not Disabled	75.8	63.0
All Disabled	24.2	37.0
Severe	11.3	24.9
Occupational	6.1	5.8
Secondary Limitation	6.9	6.3

$ Total may not add to 100% due to rounding.
Source: Lando, Cutler, and Gamber, 1982: 1, 3.

Table 12.
Work Disability, by Age and Sex, for Persons Aged 45-64:
United States, Summer 1978

Work Disability	45-54 Years	55-64 Years
Males (Total Number)	11,799,087	10,343,614
	Percent Distribution	
Total$	100.0	100.0
Not Disabled	78.3	64.6
All Disabled	21.7	35.4
Severe	9.0	21.8
Occupational	7.4	6.4
Secondary Limitation	5.3	7.2
Females (Total Number)	11,865,467	9,949,907
	Percent Distribution	
Total$	100.0	100.0
Not Disabled	73.3	61.4
All Disabled	26.7	38.7
Severe	13.5	28.1
Occupational	4.7	5.2
Secondary Limitation	8.5	5.4

$ Total may not add to 100% due to rounding.
Source: Lando, Cutler, and Gamber, 1982: 3.

More women than men reported disabilities, regardless of age (table 12). Men were more likely than women to report occupational disabilities, however.

Table 13 reports ethnic differences in work disability patterns. As can be seen, older minorities were more likely than older whites (Europeans) to report disabilities. This was particularly true for older blacks and Mexican-Americans, and for Puerto Ricans aged 55 to 64 for whom a surprising 100 percent disability rate was recorded. (It should be borne is mind that the estimates for older Puerto Ricans may not be reliable due to a small sample size.) Older minorities were also more likely than whites to report severe disabilities, but they were less likely to report occupational disabilities in most cases.

Table 13.
Work Disability, by Age and Ethnicity, for Persons Aged 45-64:
United States, Summer 1978

Work Disability	45-54 Years	55-64 Years
European (Total Number)	9,476,843	8,012,712
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	78.4	65.9
All Disabled	21.7	34.1
Severe	9.2	22.0
Occupational	5.7	6.2
Secondary Limitation	6.9	5.9
Spanish Speaking (Total Number)	1,388,045	778,008
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	72.0	53.5
All Disabled	28.0	46.5
Severe	20.2	29.8
Occupational	1.9	.8
Secondary Limitation	5.9	15.9
Mexican (Total Number)	737,937	420,170
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	60.7	41.6
All Disabled	39.3	58.5
Severe	26.0	37.6
Occupational	2.7	1.4
Secondary Limitation	10.6	19.4

Table 13. Cont.
Work Disability, by Age and Ethnicity, for Persons Aged 45-64:
United States, Summer 1978

Work Disability	45-54 Years	55-64 Years
Puerto Rican (Total Number)	151,957	90,803
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	**71.9	** 0.0
All Disabled	**28.1	**100.0
Severe	**27.9	** 59.5
Occupational	** 0.0	** 0.0
Secondary Limitation	** .2	** 40.6
Black (Total Number)	2,217,738	1,584,519
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	61.6	46.3
All Disabled	38.5	53.7
Severe	18.9	48.7
Occupational	7.5	3.8
Secondary Limitation	12.1	1.2
Other (Total Number)	10,496,875	9,760,223
	Percent Distribution	
Total*	100.0	100.0
Not Disabled	77.0	63.9
All Disabled	23.1	36.1
Severe	10.5	23.1
Occupational	6.6	6.3
Secondary Limitation	6.0	6.8

1 Excludes Europeans of Spanish origin.
2 Includes persons of Central or South American, Cuban, or other Spanish origin not shown separately.
3 Excludes those for whom ethnic origin was not reported.
* Total may not add to 100% due to rounding.
** Estimate does not meet standards of reliability.
Source: Lando, Cutler, and Gamber, 1982: 11, 14.

Interestingly, the findings reported here on overall disability patterns differ from those reported by the National Center for Health Statistics on chronic activity limitations (described above). The National Center reports that 81 percent of the 45- to 54-year-old experienced no limitation of activity and only 4 percent of this age group reported total disability in their major activity (see table 8). In contrast, data from the 1978 Disability Survey indicate that 76 percent of 45- to 54-year-olds were free of disabilities, while 11 percent reported total work disabilities. Furthermore, findings from the Health Interview Survey (National Center for Health Statistics) show that partial disabilities are more common than full disabilities among all persons aged 45 and over, while data from the Social Security Administration's Disability Survey show that this was only the case for persons aged 45 to 54. Persons aged 55 to 64 experienced severe disabilities more than partial disabilities according to the Social Security Administration's study.

The reasons for these discrepancies in findings are not clear. It is plausible that they derive in part from differences in methodologies employed in the two studies. The questionable reliability of self-reports of disability (see Siegel and Taeuber, 1982; U.S. Department of Health and Human Services, 1981) could also give rise to these discrepancies. Finally the discrepancies may stem from a temporal artifact. Reports of disability have been shown to fluctuate in accordance with conditions of the national economy, in particular unemployment rates which affect employment opportunities for workers with health problems (Lando, Coate, and Kraus, 1979). It is possible that the economic conditions extant at the time these surveys were conducted (Social Security: Summer 1978; Health Interview Survey: 1978 and 1979) may have affected reports of disability among the population.

Chronic Mobility Limitations

Chronic mobility limitations were experienced by fewer than 9 percent of the total noninstitutionalized aged population (65-plus) and less than 2 percent of the middle-aged (persons aged 45 to 64) in 1977, the latest date for which disaggregated data on mobility limitations of the aged are available (table 14). The National Center for Health Statistics uses four measures which assess chronic mobility limitations in order of their severity. These levels range from bedridden to needs help from another person in getting around outside of the neighborhood. Fewer persons experienced severe mobility restrictions (i.e., were bedridden or had mobility problems within their homes) than experienced difficulties getting around their neighborhoods and communities. This was true for all persons aged 45 and over, and it was especially true for persons aged 75 and above.

Table 14.
Mobility Limitations Due to a Chronic Condition or Impairment,
by Age, for Persons 45 Years and Over: United States, 1977

Mobility Limitation	Total 45 Years and Over	45-64 Years	65 Years and Over	65-74 Years	75-84 Years	85 Years and Over
	Percent With Limitation					
Needs help getting around outside of the neighborhood	3.9	1.6	8.4	4.6	12.0	30.6
Needs help getting around within the neighborhood	2.7	1.0	6.0	3.1	8.3	24.4
Needs help getting around within the house	1.2	.5	2.6	1.4	3.4	10.8
Bed-ridden all or most of the day	1.1	.6	2.1	1.4	2.6	6.0

Source: National Center for Health Statistics, unpublished data, 1982.

Chronic mobility limitations are clearly associated with age. More of the very old (85-plus) experienced mobility limitations than the old-old (75 to 84), the young-old (65 to 74) or the middle-aged (45 to 64).

Sizable increases in the percentage of persons reporting mobility problems can also be seen for the age cohorts of 75 and over compared to persons younger. *The pattern for persons 65 to 74 was more akin to that of persons aged 45 to 64 than it was to persons aged 75 and above.* For example, 3 percent or more of the 65- to 74-year-olds than the 45- to 64-year-olds reported difficulties in independent mobility outside their neighborhoods. In contrast, 7 percent more of the 75- to 84-year-olds and 26 percent more of those aged 85 and over compared to those aged 65 to 74 reported these types of mobility limitations. In all, fewer than 5 percent of the 65- to 74-year-olds experienced mobility limitations outside their neighborhoods, while 12 percent of the 75- to 84-year-olds and over 30 percent of the group aged 85 and over reported difficulties getting around outside their neighborhoods because of a health problem.

More women than men reported mobility limitations (table 15). This was true for all age groups over 45 and for each type of mobility problem assessed. Sex differences in the experience of mobility limitations were particularly pronounced among those aged 75 and over, however.

Table 15.
Mobility Limitations Due to a Chronic Condition or Impairment,
by Age and Sex, for Persons 45 Years and Over: United States, 1977

Mobility Limitation	Total 45 Years and Over	45-64 Years	65 Years and Over	65-74 Years	75-84 Years	85 Years and Over
Males						
	Percent With Limitation					
Needs help getting around outside of the neighborhood	2.8	1.3	6.0	3.4	9.8	20.7
Needs help getting around within the neighborhood	1.9	.9	4.1	2.2	6.7	15.4
Needs help getting around within the house	.9	.5	1.9	1.1	2.9	8.0
Bed-ridden all or most of the day	.9	.5	1.8	1.3	2.4	‡4.6
Females						
	Percent With Limitation					
Needs help getting around outside of the neighborhood	4.8	1.8	10.0	5.4	13.4	35.2
Needs help getting around within the neighborhood	3.3	1.0	7.3	3.9	9.4	28.7
Needs help getting around within the house	1.5	.6	3.0	1.7	3.7	12.2
Bed-ridden all or most of the day	1.3	.7	2.2	1.5	2.7	6.6

‡ Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

Greater percentages of blacks than whites reported mobility limitations for each age group and for each type of problem (table 16). The same pattern was found for all the other races in comparison to whites: They reported mobility limitations more often than whites, regardless of age.

Table 16.
Mobility Limitations Due to a Chronic Condition or Impairment, by Age and Race, for Persons 45 Years and Over: United States, 1977

Mobility Limitation	Total 45 Years and Over	45-64 Years	65 Years and Over	65-74 Years	75-84 Years	85 Years and Over
	Percent With Limitation					
White						
Needs help getting around outside of the neighborhood	3.7	1.5	8.0	4.2	11.3	30.1
Needs help getting around within the neighborhood	2.5	.9	5.6	2.9	7.6	23.9
Needs help getting around within the house	1.1	.5	2.4	1.3	3.2	9.5
Bed-ridden all or most of the day	1.1	.6	2.0	1.4	2.6	5.0
Black						
Needs help getting around outside of the neighborhood	5.9	2.3	13.2	7.9	20.7	36.8
Needs help getting around within the neighborhood	4.3	1.5	10.2	5.3	17.0	31.2
Needs help getting around within the house	2.2	1.0	4.7	§2.5	§5.4	§24.8
Bed-ridden all or most of the day	1.4	.9	2.7	§1.6	§2.2	§16.0
All Other						
Needs help getting around outside of the neighborhood	5.3	2.1	12.4	7.4	19.1	35.1
Needs help getting around within the neighborhood	3.9	1.3	9.5	5.0	15.7	29.8
Needs help getting around within the house	2.0	.9	4.4	§2.3	§4.9	§23.7
Bed-ridden all or most of the day	1.4	.8	2.7	§1.6	§2.4	§15.3

§ Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

SICK DAYS

Days of Restricted Activity

Days of restricted activity is a measure of the number of days persons reduce their usual activities during a specified period of time because of an illness, whether that illness is chronic or acute (National Center for Health Statistics, 1964). Thus, this measure taps the level of "sickness" in a population.

In 1978–79, persons aged 45 and over restricted their usual activities due to illness an average of 31 days per year (table 17). The average number of restricted activity days per person increased from about 23 days to about 46 days per year between the age groups of 45 to 54 and 75-plus. The difference between persons aged 62 to 64 and 65 to 68 (the age groups most relevant to changes in Social Security) was less dramatic: from 31 days to 35 days of restricted activity per person per year. Women reported more days of restricted activity compared to men, and this was true for each age group (table 18). Older blacks and Hispanics, especially older blacks, reported more days of restricted activity compared to whites, and again this was true regardless of age (table 19).

Table 17.
Days of Restricted Activity, by Age,
for Persons 45 Years and Over: United States, 1978-79*

Restricted Activity	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	66,495	22,856	14,888	5,686	6,803	7,961	8,303
Restricted Activity Days (Number in Thousands)	2,071,579	519,668	427,238	176,785	241,013	324,299	382,576
Days of Restricted Activity Per Person Per Year	31.2	22.7	28.7	31.1	35.4	40.7	46.1

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 18.
Days of Restricted Activity, by Age and Sex, for Persons 45 Years and Over: United States, 1978-1979*

Restricted Activity Days	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	11,039	7,059	2,656	2,978	3,440	3,087
Restricted Activity Days (Number in the Thousands)	838,182	219,517	193,640	76,718	87,838	130,881	129,588
Restricted Activity Days Per Person Per Year	27.7	19.9	27.4	28.9	29.5	38.0	42.0
Females (Population in the Thousands)	36,237	11,817	7,829	3,030	3,824	4,521	5,216
Restricted Activity Days (Number in the Thousands)	1,233,396	300,152	233,598	100,066	153,175	193,417	252,988
Restricted Activity Days Per Person Per Year	34.0	25.4	29.8	33.0	40.1	42.8	48.5

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 19.
Days of Restricted Activity, by Age and Ethnicity,
for Persons 45 Years and Over: United States, 1978-80*

Restricted Activity Days	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic) (Population in the Thousands)	173,481	36,837	20,443
Restricted Activity Days (Number in the Thousands)	3,241,400	906,427	790,441
Days of Restricted Activity Per Person Per Year	18.7	24.6	38.7
Black (Non-Hispanic) (Population in the Thousands)	24,863	4,012	1,986
Restricted Activity Days (Number in the Thousands)	553,803	153,639	113,025
Days of Restricted Activity Per Person Per Year	22.3	38.3	56.9
Hispanic (Population in the Thousands)	14,298	2,076	748
Restricted Activity Days (Number in the Thousands)	261,285	66,377	34,800
Days of Restricted Activity Per Person Per Year	18.3	32.0	46.5

* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.

Source: National Center for Health Statistics, unpublished data, 1982.

Days of Bed Disability

A person may feel ill, restrict his or her usual activities, but still be able to function, to carry on in a fairly normal way. If, however, the illness causes the person to stay in bed for the major portion of the day, that person can be considered incapacitated due to illness for the duration of the bed confinement. Thus a measure of bed disability days is one indication of the sickness incapacitation level of a population. It is a more exact measure of the impact of illness on functioning than is a measure of restricted activity alone. In addition it is a measure less sensitive to variations in the types of activities persons usually perform.

Persons aged 45 and over spent an average of 11 days per year in bed because of illness in 1978–79 (table 20). Gradual increases can be observed between age groups until age 75 when a more marked increase appears. *Persons aged 45 to 54 spent an average of 8 days per year in bed due to illness; persons aged 55 to 61 spent 9 days; persons 62 to 64 spent 11 days; those 65 to 68 spent 12 days; those 69 to 74 spent 13 days; and those 75-plus spent 17 days.* In regard to worklife extension, it is important that it was only for those persons aged 69 and older that the average number of bed days per year exceeded one per month.

Women reported slightly more bed disability days per year than did men for each age group (table 21). The pattern of increased number of bed days with greater age was found for both men and women however.

Older blacks and Hispanics reported more bed disability days compared to older whites (table 22). Older blacks had the highest incidence of bed disability days of the three ethnic groups reported here. Blacks aged 65 and over reported an average of 23 bed days per year compared to 21 and 13 days reported by Hispanics and whites respectively. A similar pattern was found among persons aged 45 to 64.

Table 22.
Days of Bed Disability, by Age and Ethnicity,
for Persons 45 Years and Over: United States, 1978-80*

Bed Disability Days	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic) (Population in the Thousands)	173,481	36,837	20,443
Bed Disability Days (Number in the Thousands)	1,139,520	285,219	263,445
Days of Bed Disability Per Person Per Year	6.6	7.7	12.9
Black (Non-Hispanic) (Population in the Thousands)	24,863	4,012	1,986
Bed Disability Days (Number in the Thousands)	234,344	56,176	45,458
Days of Bed Disability Per Person Per Year	9.4	14.0	22.9
Hispanic (Population in the Thousands)	14,298	2,076	748
Bed Disability Days (Number in the Thousands)	111,052	24,910	15,516
Days of Bed Disability Per Person Per Year	7.8	12.0	20.7

* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.

Source: National Center for Health Statistics, unpublished data, 1982.

Absences from Work Because of Illness

National data on work-loss days for the older population are only available for the age groups of 45 to 64 and 65 and over. The relatively small number of persons over the age of 65 who continue to work precludes disaggregated analysis of work-loss days by age (National Center for Health Statistics, 1982a). Consequently, this section discusses absences from work because of illness for the civilian noninstitutionalized population in these two age groups.

Table 23 summarizes findings on work-loss days by age in 1981 for persons over age 45. As can be seen, *persons aged 65 and over reported fewer days lost from work because of illness (approximately 4 days per person per year) than did persons aged 45 to 64 (almost 6 days per person per year).* Men reported slightly fewer work-loss days than women, except among persons aged 65 and over (table 24).

Table 23.
Work-Loss Days, by Age, for Persons 45 Years and Over:
United States, 1981

Work-Loss Days	All Ages	45-64 Years	65 Years and Over
Population in the Thousands	225,048	44,179	24,849
Currently Employed Population (Population in the Thousands)	100,324*	27,513	3,270
Work-Loss Days (Number in the Thousands)	491,781	156,925	13,707
Days of Work-Loss Per Person Per Year	4.9	5.7	4.2

Note: Work loss reported for currently employed persons aged 17 years and over.
*Estimate for all ages 17 years and over.
Source: National Center for Health Statistics, 1982.

Table 24.
Work-Loss Days, by Age and Sex, for Persons 45 Years and Over:
United States, 1981

Work-Loss Days	All Ages	45-64 Years	65 Years and Over
Males (Population in the Thousands)	108,567	20,948	10,169
Currently Employed Population (Population in the Thousands)	57,346*	16,328	1,997
Work-Loss Days (Number in the Thousands)	262,062	90,713	8,851
Days of Work-Loss Per Person Per Year	4.6	5.6	4.4
Females (Population in the Thousands)	116,481	23,231	14,680
Currently Employed Population (Population in the Thousands)	42,978*	11,186	1,272
Work-Loss Days (Number in the Thousands)	229,719	66,213	4,855
Days of Work-Loss Per Person Per Year	5.3	5.9	3.8

Note: Work loss reported for currently employed persons aged 17 years and over.
*Estimate for all persons 17 years and over.
Source: National Center for Health Statistics, 1982.

Findings from other studies corroborate the fact that absenteeism rates of aged workers are comparable to or better than the rates of middle-aged and younger workers (see, for example: Kelleher and Quirk, 1973; Meier and Kerr, 1976; U.S. Department of Labor, 1965). Unfortunately, it is not known how reliable this performance record would be if it were used as a basis from which to make predictions about the performance potential of current retirees. As will be discussed later, many retirees report that they retired because of their health. Thus, the present population of working aged may be a self-selected, healthier group of older persons compared to their retired age peers. The performance patterns of the working aged may not be representative of the working potential of the retired elderly population.

Older blacks and Hispanics reported more work-loss days per person per year than did older whites (table 25). Among persons aged 45 to 64, older blacks had the highest rate of work-loss compared to either whites or Hispanics. Among those 65 years and older, however, Hispanics had a higher work-loss rate than blacks or whites. Dramatically, Hispanics 65-plus had more than two times the incidence of work loss compared to their white or black age peers.

Table 25.
Work-Loss Days, by Age and Ethnicity,
for Persons 45 Years and Over: United States, 1978-80*

Work-Loss Days	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic) (Population in the Thousands)	173,481	36,737	20,443
Currently Employed Population (Population in the Thousands)	79,985**	23,684	2,852
Work-Loss Days (Number in the Thousands)	384,083	130,130	11,516
Days of Work-Loss Per Person Per Year	4.8	5.5	4.0
Black (Non-Hispanic) (Population in the Thousands)	24,863	4,012	1,986
Currently Employed Population (Population in the Thousands)	9,183**	2,463	281
Work-Loss Days (Number in the Thousands)	70,553	19,244	1,349
Days of Work-Loss Per Person Per Year	7.7	7.8	4.8
Hispanic (Population in the Thousands)	14,298	2,076	748
Currently Employed Population (Population in the Thousands)	5,163**	1,103	62
Work-Loss Days (Number in the Thousands)	25,884	7,076	646
Days of Work-Loss Per Person Per Year	5.0	6.4	10.4

Note: Work loss days reported for currently employed persons aged 17 years and over.
* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.
** Estimate for all persons 17 years and over.
Source: National Center for Health Statistics, unpublished data, 1982.

SELF-RATED HEALTH

In 1978-79, 74 percent of the older population (45-plus) rated their health as good or excellent (table 26). Within each age subgroup, as well, more than two-thirds of persons rated their health as good or excellent.

Table 20.
Days of Bed Disability, by Age, for Persons 45 Years and Over: United States, 1978-79*

Bed Disability Days	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	66,495	22,856	14,888	5,686	6,803	7,961	8,303
Bed Disability Days (Number in Thousands)	695,168	177,112	131,441	61,512	80,123	100,551	144,429
Days of Bed Disability Per Person Per Year	10.5	7.7	8.8	10.8	11.8	12.6	17.4

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 21.
Days of Bed Disability, by Age and Sex, for Persons 45 Years and Over: United States, 1978-1979*

Bed Disability Days	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	11,039	7,059	2,656	2,978	3,440	3,087
Bed Disability Days (Number in the Thousands)	279,399	72,514	52,934	26,406	34,404	41,111	52,029
Bed Disability Days Per Person Per Year	9.2	6.6	7.5	9.9	11.6	12.0	16.9
Females (Population in the Thousands)	36,237	11,817	7,829	3,030	3,824	4,521	5,216
Bed Disability Days (Number in the Thousands)	415,770	104,598	78,506	35,106	45,719	59,441	92,399
Bed Disability Days Per Person Per Year	11.5	8.9	10.0	11.6	12.0	13.1	17.7

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

A close look at the population 45 and over reveals interesting results in regard to worklife extension concerns. As can be seen in table 26, *the population aged 62 to 74 holds remarkably uniform self-perceptions of health.* Almost equal percentage of persons aged 62 to 64, 65 to 68, and 69 to 74 rated their health as excellent, good, fair, and poor.

Men tended to rate their health more at the extremes than did women: More men rated their health as excellent and slightly more rated it as poor compared to women (table 27). On the other hand, more women rated their health as good or fair compared to men.

Table 27.
Self-Assessed Health, by Age and Sex,
for Persons 45 Years and Over: United States, 1978-79*

Self-Assessed Health	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	11,039	7,059	2,656	2,978	3,440	3,087
				Percent Distribution			
Excellent	36.2	44.2	34.9	31.1	31.1	29.0	28.2
Good	38.9	38.8	39.2	38.9	38.2	38.0	40.0
Fair	16.6	11.6	16.5	19.4	21.3	22.7	20.5
Poor	7.6	4.6	8.7	10.0	8.8	9.2	10.4
Unknown	.7	.7	.7	**.6	**.6	1.0	.8
Total***	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females (Population in the Thousands)	34,237	11,817	7,829	3,030	3,824	4,521	5,216
				Percent Distribution			
Excellent	31.2	36.5	30.5	28.9	26.2	28.5	27.8
Good	42.6	43.7	43.5	43.5	41.8	41.3	40.3
Fair	19.0	14.8	18.5	20.0	23.9	22.2	22.1
Poor	6.4	4.4	6.8	6.9	7.4	7.2	8.9
Unknown	.7	.6	.7	**.8	.8	.9	1.0
Total***	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Relative standard error is more than 30%.
***Total may not add to 100% due to rounding.
Source: National Center for Health Statistics, unpublished data, 1982.

Older whites rated their health more favorably than did older blacks (table 28). Approximately 39 percent of the 45- to 64-year-old whites and 29 percent of whites aged 65-plus rated their health as excellent. This compares to 24 percent of the 45- to 64-year-old blacks and 19 percent of blacks aged 65-plus rated health as excellent.

Table 28.
Self-Assessed Health, by Age and Race,
for Persons 45 Years and Over: United States, 1980

Self-Assessed Health	All Ages	45-64 Years	65 Years and Over
White (Population in the Thousands)	187,663	38,648	21,629
	Percent Distribution		
Excellent	50.8	38.6	29.4
Good	37.2	41.4	40.3
Fair	8.9	13.9	22.1
Poor	2.7	5.8	7.4
Unknown	.3	.3	.7
Total*	100.0	100.0	100.0
Black (Population in the Thousands)	25,585	4,137	2,021
	Percent Distribution		
Excellent	39.2	23.5	18.7
Good	41.9	39.4	33.8
Fair	13.9	25.2	29.3
Poor	4.6	11.4	17.2
Unknown	.5	**.5	**1.0
Total*	100.0	100.0	100.0
Other (Population in the Thousands)	4,675	750	242
	Percent Distribution		
Excellent	48.8	38.4	28.9
Good	38.8	38.1	40.1
Fair	9.6	15.9	23.1
Poor	2.6	7.1	**7.9
Unknown	**.1	**.5	---
Total*	100.0	100.0	100.0

* Total may not add to 100% due to rounding.
** Relative standard error is more than 30%.
Source: National Center for Health Statistics, unpublished data, 1982.

Numerous investigators have attempted to identify the determinants of self-rated health among the aged and to assess the reliability of these reports (see, for example: Blazer and Houpt, 1979; Fillenbaum, 1979; Kaplan and Camacho, 1983; La Rue, Bank, Jarvik, and Hetland, 1979; Maddox and Douglass, 1973; Tissue, 1972; and Wolinsky, Coe, Miller, and Prendergast, 1984). Results of these investigations indicate that health self-ratings are acceptably reliable as compared to objective health ratings and that they can serve as useful indicators of global health status among the aged. (It should be noted, however, that some disagreement still remains in regard to this issue.) A study by Mossey and Shapiro (1982) took these investigations a step further to reveal that self-ratings of health can serve as predictors of mortality among the elderly, even more so than can objective ratings of health. Finally, Garrity (1973, 1973a) found that self-rated health predicted morale, and importantly from a worklife extension perspective, return to work after a first myocardial infarction.

OTHER HEALTH MEASURES

The previous section reported data on the health status of older persons as traditionally measured. Other measures of health can also be used, however, to assess the level of health of the older population. Though less direct, these measures reveal further information about health and the aged. They are discussed in the following section.

UTILIZATION OF MEDICAL SERVICES

Physician Visits

In 1978–79, 76 percent of persons aged 45 and over reported having had at least one physician visit a year. Persons 45 and older made approximately six physician visits per year on the average (table 29).

Both the percentage of persons making visits and the average number of visits per person per year were associated with age, but only small differences were found between age groups. For example, 73 percent of the 45- to 54-year-olds visited a physician during the year, while 78 percent of the 65- to 74-year-olds made physician visits.

From a worklife extension perspective, only minor differences existed between those aged 55 to 64 compared to those aged 65 to 74. Seventy-six percent of the 55- to 64-year-olds made physician visits in 1978–79, while 78 percent of the 65- to 74-year-olds reported a visit. On the average, 55- to 64-year-olds visited a physician about six times per year. A similar visitation rate is found for those aged 65 to 74.

Women had somewhat higher rates of physician utilization than men for all age groups (table 30). The differences between the sexes declined slightly with age, however.

Older whites reported fewer physician visits per year than did older blacks or Hispanics (table 31). Among persons aged 45 to 64, Puerto Ricans and "other Hispanics" had the highest rates of physician utilization, followed by Cubans, blacks, Mexican-Americans, and lastly whites. Among persons aged 65 and over, Cubans reported the highest rate of physician utilization, followed by Mexican-Americans.

Table 31.
Physician Visits Per Person Per Year, by Age and Ethnicity, for Persons 45 Years and Over: United States, 1978-80*

Physician Visits	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic)	4.8	5.1	6.3
Black (Non-Hispanic)	4.6	5.9	6.7
All Hispanic	4.4	5.8	8.2
Mexican American	3.7	5.3	9.1
Puerto Rican	6.0	7.1	6.6
Cuban	6.2	6.0	10.8
Other Hispanic	4.8	7.1	6.2

* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Use of Short-Stay Hospitals

In 1978 and 1979, 14 percent of the population 45 years and over experienced a hospitalization episode during the preceding year. The average length of these hospital stays was 10 days (table 32).[3]

---

[3] It should be noted that these estimates do not record persons who were hospitalized and died. Neither do they allow the reader to assess if the same persons are repeat hospital users from year to year or if most of the population is affected. These facts should be recalled as the findings are reviewed.

Table 26.
Self-Assessed Health, by Age, for Persons 45 Years and Over: United States, 1978-79*

Self-Assessed Health	Total 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	66,495	22,856	14,888	5,686	6,803	7,961	8,303
	Percent Distribution						
Excellent	33.5	40.2	32.6	29.9	28.3	28.7	27.9
Good	40.9	41.3	41.4	41.3	40.2	39.9	40.2
Fair	17.9	13.3	17.6	19.7	22.7	22.4	21.5
Poor	7.0	4.5	7.7	8.3	8.0	8.1	9.5
Unknown	.7	.7	.7	.7	.7	1.0	.9
Total**	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Total may not add to 100% due to rounding.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 29.
Average Rate of Physician Utilization, by Age, for Persons 45 Years and Over: United States, 1978-79*

Physician Utilization	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Population in the Thousands	66,495	43,429	22,856	20,573	23,066	14,763	8,303
Percent with Visit in Year	76.1	74.0	72.7	75.6	79.8	78.4	82.4
Visits Per Person Per Year	5.6	5.3	4.9	5.6	6.3	6.2	6.5

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 30.
Average Rate of Physician Utilization, by Age and Sex, for Persons 45 Years and Over: United States, 1978-1979*

Physician Visits	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	20,754	11,039	9,715	9,505	6,418	3,087
Percent with Visit in Year	71.9	69.9	67.4	72.8	76.3	74.9	79.4
Visits Per Person Per Year	5.0	4.7	4.1	5.3	5.9	5.7	6.2
Females (Population in the Thousands)	36,237	22,676	11,817	10,858	13,561	8,345	5,216
Percent with Visit in Year	79.5	77.8	77.6	78.1	82.3	81.1	84.1
Visits Per Person Per Year	6.1	5.8	5.7	5.9	6.6	6.6	6.6

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Table 32.
Average Rate of Short-Stay Hospital Utilization, by Age, for Persons 45 Years and Over: United States, 1978-79*

Short-Stay Hospital Utilization	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Population in the Thousands	66,495	43,429	22,856	20,573	23,066	14,763	8,303
Percent with Episode in Year	13.9	11.7	11.0	12.5	18.1	16.5	21.0
Discharges per 100 Persons per Year	20.5	17.1	15.7	18.8	26.9	24.3	31.5
Average Length of Stay per Discharge	10.2	9.3	8.7	9.8	11.4	10.5	12.5

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

The incidence of hospitalization was greater for the population aged 65 to 74 (17 percent) and for those aged 75-plus (21 percent) compared to the middle-aged (45 to 64) population (12 percent). Similarly, persons aged 65 and over had somewhat longer hospital stays on the average (11 days) than persons aged 45 to 64 (9 days). The pattern of the 55- to 64-year-olds compared to that of the 65- to 74-year-olds followed the same trend—an increase between age groups in the use of short-stay hospitals can be observed.

Looking at the differences between age groups, it is interesting to note that in all measure of hospital use presented, the differences between the 65- to 74-year-olds and those aged 75-plus are greater than the differences between the other age groups. Thus, the pattern for the 75-plus group differs more from that of the 65 to 74 age group than the 65 to 74 group differs from the 55- to 64-year-old group.

A slightly greater percentage of men than women reported hospitalization episodes during a 1-year period and this was particularly true for persons over age 65 (table 33). Moreover once hospitalized, men reported longer hospital stays than women, indicating that men may delay hospitalization until an illness has reached more serious levels or that they may suffer from inherently more serious conditions.

Table 33.
Average Rate of Short-Stay Hospital Utilization, by Age and Sex, for Persons 45 Years and Over: United States, 1978-1979*

Short-Stay Hospitals	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	20,754	11,039	9,715	9,505	6,418	3,087
Percent with Episode in Year	14.0	11.6	10.3	13.2	19.0	17.5	22.4
Discharges Per 100 Persons Per Year	20.9	17.0	14.3	20.2	29.2	25.8	36.3
Average Length of Stay Per Discharge	11.1	10.1	9.5	10.6	12.2	11.1	13.9
Females (Population in the Thousands)	36,237	22,676	11,817	10,858	13,561	8,345	5,216
Percent with Episode in Year	13.9	11.8	11.7	11.9	17.5	15.8	20.2
Discharges Per 100 Persons Per Year	20.2	17.2	16.9	17.5	25.2	23.1	28.7
Average Length of Stay Per Discharge	9.5	8.5	8.2	8.9	10.6	10.0	11.5

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Almost equal percentages of blacks, whites, and Hispanics aged 45 and over utilized short-stay hospitals during a 1-year period (table 34). Blacks tended to have somewhat longer hospital stays compared to Hispanics or whites however.

Table 34.
Average Rate of Short-Stay Hospital Utilization, by Age and Ethnicity, for Persons 45 Years and Over: United States, 1978-80*

Short-Stay Hospital Utilization	All Ages	45-64 Years	65 Years and Over
White (Non-Hispanic) (Population in the Thousands)	173,481	36,837	20,443
Percent with Episode in Year	10.5	11.7	18.3
Average Days of Hospitalization Per Hospitalized Person Per Year	9.4	11.9	14.2
Black (Non-Hispanic) (Population in the Thousands)	24,863	4,012	1,986
Percent with Episode in Year	10.3	12.6	17.3
Average Days of Hospitalization Per Hospitalized Person Per Year	11.3	15.3	18.6
Hispanic (Population in the Thousands)	14,298	2,076	748
Percent with Episode in Year	9.4	10.5	18.7
Average Days of Hospitalization Per Hospitalized Person Per Year	8.6	11.3	13.2

* Table reports average annual estimates computed on a 3-year base using 1978, 1979 and 1980 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Dental Visits

Forty-three percent of the 45-plus population made a dental visit during 1978–79. During this period, persons aged 45 and over made on the average two visits per year (table 35).

Table 35.
Average Rate of Dental Care Utilization, by Age, for Persons
45 Years and Over: United States, 1978-79*

Dental Care Utilization	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 years and Over
Population in the Thousands	66,495	43,429	22,856	20,573	23,066	14,763	8,303
Percent with Visit in Year	43.2	48.9	51.3	46.3	32.5	36.6	25.4
Visits per Person per Year	1.7	1.8	1.9	1.8	1.3	1.5	1.1

* Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Use of dental services was negatively associated with age; fewer people aged 65-plus (33 percent) visited a dentist in 1978–79 than people aged 45 to 64 (49 percent). The differences between the oldest age group, those 75-plus, and the youngest reported here, those aged 45 to 54, were even more pronounced: 25 percent compared to 51 percent respectively visited a dentist in 1978–79.

Sex differences in the rate of dental care utilization were minimal; however, the overall pattern was toward greater utilization by women compared to men (table 36).

Table 36.
Average Rate of Dental Care Utilization, by Age and Sex,
for Persons 45 Years and Over: United States, 1978-1979*

Dental Visits	Total 45 Years and Over	45-64 Years	45-54 Years	55-64 Years	65 Years and Over	65-74 Years	75 Years and Over
Males (Population in the Thousands)	30,259	20,754	11,039	9,715	9,505	6,418	3,087
Percent with Visit in Year	42.6	47.9	49.6	46.0	31.1	34.4	24.1
Visits Per Person Per Year	1.5	1.7	1.8	1.7	1.2	1.2	1.0
Females (Population in the Thousands)	36,237	22,676	11,817	10,858	13,561	8,345	5,216
Percent with Visit in Year	43.8	49.8	52.8	46.6	33.6	38.2	26.2
Visits Per Person Per Year	1.7	1.9	2.0	1.8	1.4	1.7	1.1

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
Source: National Center for Health Statistics, unpublished data, 1982.

Older whites used dental services more than older blacks or other racial groups (table 37). On the average, whites aged 45 and over made almost two dental visits per person per year. Older blacks (45-plus) made closer to one visit per person per year, and blacks aged 65-plus made less than one visit per person per year.

Table 37.
Average Rate of Dental Care Utilization, by Age and Race, for Persons 45 Years and Over: United States, 1981

Dental Care Utilization	Total 45 Years and Over	45-64 Years	65 Years and Over
White (Population in the Thousands)	61,632	39,167	22,465
Total Visits in Year (Number in the Thousands)	108,649	73,996	34,653
Visits Per Person Per Year	1.8	1.9	1.5
Black (Population in the Thousands)	6,242	4,173	2,069
Total Visits in Year (Number in the Thousands)	7,451	5,668	1,782
Visits Per Person Per Year	1.2	1.4	.9
Other (Population in the Thousands)	1,153	839	315
Total Visits in Year (Number in the Thousands)	1,257	1,198	60
Visits Per Person Per Year	1.1	1.4	.2

Source: National Center for Health Statistics, unpublished data, 1982.

RETIREMENTS DUE TO HEALTH

Health is given as a reason for retirement by a major segment of the retiree population. Although there is much debate in the employment and retirement literature as to whether health is the "real" reason for these retirement decisions, as opposed to other factors such as economic resources, the fact remains that a sizable percentage of the older population reports that they retired because of health.[4] The Harris Poll conducted for the National Council on Aging (1981), for instance, found that 27 percent of the entire retiree population cited poor health or disability as their reason for retirement.

In 1978–79, 33 percent of the retired population aged 45 and over indicated that they retired because of health, according to data collected by the National Center for Health Statistics (table 38). Far greater percentages of younger, early retirees than retirees aged 65 and over cited health reasons for retirement. For example, 77 percent of the retirees aged 45 to 54 cited health as their reason for retirement, compared to 27 percent of those aged 65 to 68 and 19 percent of those 75 and over.

---

[4] For a further examination of this debate, see: Kingson, 1981, 1982, 1983; and Myers, 1982, 1983.

Other studies have also found health reasons for retirement to be prominent among early retirees. Kingson (1981), using data from the National Longitudinal Survey, found that 85 percent of white and 91 percent of black men who had permanently left the labor force before age 62 (a group Kingson calls very early retirees), reported work limitations due to health at the time of their retirement. Schwab (1976), in her study of early retirees based on data from the Retirement History Study, found that 65 percent of the early retirees cited health as the reason for their retirement. Similarly, Reno (1976) found that health problems were the most important reason given by men who took early retirement benefits. Finally, Parnes and Nestel (1975) reported findings, based on data from the National Longitudinal Survey, that one-third of white and over one-half of black early retirees were "forced out" of the labor market because of poor health.

Little is known about the impact of health problems on older persons' employment behaviors. Do health problems "force" people to retire? Or do older workers with health problems retire because they have no other employment options? Or both or neither? Findings from several studies indicate that health problems experienced at older ages may result in a forced choice of work-not work. For instance, Andrisani (1977), in a study of health among middle-aged men, found that "Apparently, health limitations caused middle-aged men to drop out of the work force when they left jobs rather than to search more extensively for new ones." (Page 107.) Others have found that contrary to their *a priori* expectations, older workers do not seem to transfer to new jobs as a means of accommodating to health limitations. Instead, they drop out of the labor force (Chirikos and Nestel, 1981). Exactly why this happens is not known. Further study is needed in this area.

PHYSIOLOGICAL MEASURES

It is only since the middle 1950's that research on aging moved away from comparative studies between institutionalized older persons and young college students. Since that time several longitudinal studies have been mounted to examine more accurately physiological changes with age (Weg, 1975). The most prominent among these include those conducted by Birren (1963, 1971) at the National Institutes of Health; Shock (1962, 1968) at the Gerontology Research Center; and the longitudinal study undertaken at the Duke Center on Aging (Palmore 1970, 1974).

Findings from these and other studies have shown that the process of aging is associated with a gradual decline in function in most organ systems (Weg, 1975). In the absence of disease, this decline is steady and slow (about 1-percent decline in function per year).

Not all functional changes which accompany aging are caused by the process of aging, however. Many physiological declines are behaviorally induced and result from poor nutrition, lack of exercise, drug use, or other behavior patterns. Others are due to diseases, which may or may not be associated with behavior. Still others stem from psychological states such as depression (Weg, 1975; Insitute of Medicine, 1981).

Not all physiological changes are experienced by individuals at the same time or in the same way. Tremendous variability exists among older persons, and even within a single older person different organs or systems may age at different rates. Furthermore, no one age can be identified at which declines commence or accelerate. And although physiological declines are associated with aging, they are not peculiar to the aged; many physiological changes begin well before age 60 (Weg, 1975; Institute of Medicine 1981).

The effects of these physiological changes can be seen in increased vulnerability to disease and diminished capacity to respond to stress with age (Weg, 1975). The relationship between aging, physiology and work capacity is less clear. Threats to functioning which physiological changes pose are often countered by the residual and adaptive capacities humans inherently possess.

SUMMARY

On the whole it is clear that health problems are more common among the older population (65-plus) than among persons younger (45 to 64). Older persons more often experience chronic conditions, physical impairments and functional limitations due to health compared to the middle-aged. They also tend to utilize physicians and short-stay hospitals more than middle-aged persons. On the other hand, middle-aged persons experience acute conditions and utilize dental services more often than older persons. They also report more work-loss days than older persons, although this may be partially due to the retirement of unhealthy older workers.

While health problems are more common among older persons compared to those younger, it should be noted that in several cases the differences between these groups were not substantial. For example, this was true in regard to the incidence of bed disability days (with the exception of those aged 75-plus), the use of physician services, and the use of short-stay hospitals.

That older persons would report more health problems than middle-aged persons is not surprising. Biological aging involves regular changes in the organism with the passage of time which make the organism less likely to survive. The findings from research on the physiology of aging, reported above, show this. In part, it is this process of aging which we see reflected by health measures as applied to the older population.

In addition, health levels are often reported in terms of prevalence rates of conditions. These measures reveal the sum of nonlethal health conditions experienced by the older population, those conditions accumulated over the lifetime of that population which persist into their old age, as well as lethal and nonlethal conditions newly experienced in old age. Since the older population has had more years to accumulate greater numbers of remaining conditions, it is not surprising that as a group their prevalence rates would be higher than younger persons.

The data reveal that health problems *increase gradually* across groups of increasing age. In numerous instances (for example, prevalence of work disability, incidence of bed disability days, use of medical services) only small differences were found between groups close in age. Moreover, by disaggregating the data, it was shown that the young-old (65 to 74) were often more like the middle-aged (45 to 64) in their health level than like the old-old (75-plus).

Despite the fact that health problems are associated with age, it should be borne in mind that the majority of the population 45 years and over report no functional limitations due to chronic conditions. Only about 10 percent of this population reported that they were unable to work or do housework because of chronic conditions. Persons aged 45 to 68 spent less than 1 day in bed per month on the average due to illness. And over two-thirds of persons aged 45 and above rated their health as good or excellent. We should not let a focus on trends overshadow the fact that the majority of older people feel well and are not handicapped or disabled—in other words, a large segment of the older population is able-bodied.

At the same time, a sizable minority of the older population reported that they were functionally impaired. This fact, too, should be recognized. Thirty-one percent of the older population (45-plus) reported some level of impairment due to health limitations (10 percent reported that they were unable to perform their major activities because of their problems; the remainder reported lesser levels of impairment).

Worklife extension issues primarily apply to persons aged 55 to 74, and especially to those aged 62 to 68, the age cohort that would be most affected by changes in the retirement age of Social Security. These data have allowed us to examine closely the health profiles of persons in these age groups. While it should be recalled that health is not the only variable which determines whether or not a person can or wants to work or how well that person works (other factors such as the availability of jobs, motivation, personnel practices, and personal considerations influence worker behavior as well) these data do help us evaluate the level of health of the older population as it can potentially impinge on worklife extension. The findings reveal that while health problems are more frequently experienced among older compared to middle-aged persons, in numerous cases the differences between the groups were small. In several instances as well, it was found that persons aged 65 to 74 were more like persons 45 to 64 in their health profiles than they were like persons 75 and over. Similar patterns, for example, were found in regard to the prevalence of physical impairments and work disabilities; the incidence of restricted activity days and bed disability days; the utilization of doctors and short-stay hospitals; and in self-perceptions of health. So while health problems are more common among older persons, age 65 is not a threshold to dramatic changes in health patterns.

In regard to worklife extension, another finding worth highlighting here is that a sizable percentage of older persons reported partial work disabilities (defined as limited in amount or kind of major activity they could perform). Sixteen percent of those aged 45 and over (14 percent of the 55- to 61-year-olds, 16 percent of the 62- to 64-year-olds, 20 percent of the 65- to 68-year-olds, and 22 percent of the 69- to 74-year-olds—the worklife extension group) reported that they were limited in the amount or kind of major activity they could perform. For these people, worklife extension may depend heavily upon their success in locating jobs suited to their abilities.

Finally, the experience of health and aging differed by sex and by race and ethnicity. In numerous cases, women reported more health problems than men, regardless of age. They reported more acute and chronic conditions, more experiences of partial disability, restricted activity days and sick days, and somewhat more use of physician services than men. Fewer women than men, however, reported full disabilities. The types of impairments they experienced also differed, with men reporting more sensory problems and women more orthopedic problems of the back and lower extremities.

Older minorities also reported health problems more than older whites in numerous instances. Older blacks, in particular, evidenced health disadvantages when compared to their white age peers. This was especially true in the areas of chronic activity limitations, days of restricted activity and bed disability, and self-assessments of health.

The health of the older population can be observed through the use of various health measures. This section has reported data derived from a variety of measures. It has revealed that the older population, and in particular the young-old population (65 to 74), is not as unhealthy as is widely believed. Health problems do increase with age, but this is not to say that all older people experience these problems or that all health problems are of equal severity in their impact on longevity or functional capacity.

What this means in terms of worklife extension will be discussed in the section to follow. That discussion will focus on health and other variables, for example, the structure of jobs, which bear on worklife extension and the older population.

Chapter 4

HEALTH, AGING, AND WORK

When considering the health of the older population in terms of employment issues, three concerns are paramount:

(1) Supply of older workers.

(2) Demand for older workers, including productivity and costs for employee health care; and

(3) Health maintenance.

Government leaders and employers question whether the health of older people prevents them from participating in the labor force or whether it disinclines them from wanting to work; whether health problems reduce the productivity of older persons if they do work; whether the health problems of older people result in increased health care costs to employers; and whether continued work potentially threatens the level of health of older people or whether it helps them to maintain good health.

These concerns fall under two major areas of study: the impact of health on work, and the impact of work on health. Questions regarding labor supply, productivity, and costs come under the first study area and questions regarding health maintenance fall under the second.

This paper has presented data useful for evaluating issues related to labor supply, productivity potential, and costs. (The third issue area, that of health maintenance, falls within a different realm of study and is beyond the scope of this paper.) The intent of this paper is not to research these issue areas, but rather to provide data and raise points for consideration which will help decisionmakers as they reflect on topics of worklife extension. Furthermore it must be remembered that health is only one of several variables which impinge on these issues.

In the discussion which follows, two topics are addressed: (1) Issues related to health, aging and work which arise from consideration of the data presented above; and (2) the need for further research on health, work and aging.

HEALTH AND THE AGING IN THE WORKPLACE

What are the implications for extended worklife of the health patterns of older people? The following discussion raises questions in four issue areas related to health, aging, and work based on what we know about the health of the older population. These topical areas are: Rating work potential; situational disability; groups at risk of disability; and health promotion.

RATING WORK POTENTIAL

The data presented above revealed that older people, as a group, experience more health problems than middle-aged persons. In several instances, however, these differences were not pronounced. This was particularly true in regard to functional abilities. In addition, the data revealed that large numbers of older people are able-bodied, as indicated by the fact that they rated their health as good or better, reported no functional limitations, reported that they were not unable to work or perform their major activity because of their health, and reported that they did not have hospitalization episodes during a 1-year period. Nevertheless, it should not be forgotten that health problems do confront many older Americans.

Rather than attempt to characterize the health of older people on a total group basis, for employment considerations it would be more fruitful to categorize older individuals along a scale rating their potential for work performance. Thus, older people could be categorized into three groups: the *able-bodied,* which would include those free of functional impairment; the *impaired,* which would include people who have health problems that limit their work potential but which do not incapacitate them; and the *disabled,* which would include those persons too sick or too functionally impaired to be able to work.

But potential for work performance is not the sole criterion affecting whether or not a person can become successfully employed. In recognition of this fact, vocational experts distinguish between the concepts of *employability* and *placeability.* Employability refers to whether or not a worker is "physicially and mentally equipped to perform any given job. Placeability on the other hand involves the availability of that job in the labor market" (Feingold, 1969:31). Placeability also involves a worker's ability to compete successfully against other workers for jobs, employers' attitudes toward hiring workers who have health problems, and other factors such as the age, experience, and educational level of a worker which affects his or her attractiveness as an employee.

For many workers with health limitations, it is problems of placeability (ability to secure a job) rather than employability (ability to perform a job) which hamper their success in job seeking. Thus ratings of work potential should incorporate measures of worker placeability as well as employability.

An index of placeability might include measures of educational and skill levels, age, and type of health problem. These have been identified as influencers of placeability (Jaffe, Day, and Adams, 1964). It might be added as well, that some of these measures are currently used by the Social Security Administration in assessing vocational disability as part of their evaluation for determining eligibility for disability benefits.

Workers could be rated as to their employability (able-bodied, impaired, disabled) and placeability (high, low). The result could be charted on a matrix which categorizes workers according to their work potential (see figure 2). The particular employment abilities, barriers and needs of these groups would differ. A similar type of schema has been suggested by Matheson (1982) who proposes ratings along dimensions of residual functional capacity and skills/

education. The approach described here, however, goes beyond that outlined by Matheson to propose a more comprehensive rating system.

Figure 2. Rating Work Potential

	Placeability	
Employability	High	Low
Able-bodied	1	2
Impaired	3	4
Disabled	5	6

Rating:

1) Good work potential.
2) Modest work potential. May need training and/or vocational assistance.
3) Modest-good work potential. May need vocational/rehabilitative assistance.
4) Fair work potential. Will need training, vocational, and/or rehabilitative assistance.
5) Poor-fair work potential. Vocational and rehabilitative assistance may improve potential.
6) Poor work potential.

Government leaders can help to promote the development of more refined measures for assessing work potential among the elderly, such as the one sketched above. These measures could then be used in population surveys to estimate the numbers of people who fall into the different categories. This would help to facilitate employment policymaking and planning. Decisionmakers would have better information on which to base policies and would be better able to target employment programs. Furthermore, negative images of the elderly's capacities would be countered. No longer would the problems of a subgroup color the perception of the whole group.

The Social Security Administration's Disability Surveys are a step in this direction. Unfortunately, as described above, these surveys do not measure disability levels among the 65-plus population. This omission needs correcting. Furthermore, measures of disability used in these surveys yield only a rough profile of the disabled population. More refined measures are needed to assess better the types of disabilities experienced so that appropriate interventions can be developed.

SITUATIONAL DISABILITY

As indicated by the data, many older persons reported that they were partially disabled. In other words, many older persons reported that chronic conditions limited the amount or kind of work they could perform.

Work ability, like health, depends upon the context in which it is tested. No person is able to perform every possible job, regardless of his or her health. Each person brings to a particular job his or her own interests, skills and abilities, and depending upon the job-person match, that person will or will not be able to perform adequately. Greenberg and Greenberg (1980), in a study of 360,000 sales employees in 14 industries in the United States, Canada, and Western Europe, found that job-person match predicted performance outcomes better than did years of experience, educational level, sex, race, or age of the employee. Other vocational experts also stress the importance of job-person match for successful performance outcomes (Mund, 1978; Mosher, 1978; Koyl, 1974; Thompson, 1957).

In regard to older persons with health limitations, the job-person match variable is significant: It indicates that *some older persons are able to work, despite health limitations, if they can find jobs suited to their needs.* Government leaders can help older persons in these efforts in two ways.

By recent tradition, work in our society has been structured rigidly to conform to an 8-hour-day, 5-day-a-week model. To the extent that some older people's health limits their ability to perform for this duration of time, those persons will be disabled. If, however, work schedules were made more flexible, through the development of alternative work options for instance, more older persons would be able to work. Worklife extension could thus be facilitated through the promotion of alternative structures to work.

In addition to promoting jobs better structured to the needs of older workers with health problems, government leaders can help older persons locate and train for these jobs. Presently, older workers with health problems fall through the cracks of vocational programs targeted toward older workers in particular and those targeted toward the disabled in general (Dunn, 1981). This situation needs correcting. Unless alternative scenarios are available to older workers who develop health problems, they may see no alternative for themselves other than forced health retirements.

GROUPS AT RISK OF DISABILITY

Clearly some older persons are not able to work because of their health. Particular groups within the population, for example older women and minorities, may be particularly at risk of disability. Efforts need to be directed toward identifying these groups. Worklife extension is not a viable alternative for all older persons. This fact cannot be overlooked by proposals aimed at increasing the labor force participation of the older population.

HEALTH PROMOTION

Research on the physiology of aging, as reported earlier, indicates that some functional declines which accompany the process of aging can be attributed to the health behavior of individuals rather than the process of aging itself. These findings signal opportunities to promote health and prevent functional declines.

The workplace is one setting where such efforts could be undertaken. Employers have a vested interest in promoting the health and performance capabilities of their workers. Government seeks to encourage extended worklife in an effort to reduce benefit payment levels. A partnership between government and business could help to achieve both ends.

Programs which could be supported include exercise activities, health education, smoking cessation efforts, alcohol and substance abuse prevention, blood pressure and other health screenings, diet control, and counseling. Early rehabilitation and accommodation efforts could also be made to prevent health problems from developing into disabilities. Many companies have already established programs for their workers in a number of these areas. A study of over 1,400 American companies conducted by the Conference Board, for instance, found that 40 percent of the companies offered flu shots and blood pressure checks at the worksite; approximately 29 percent conducted individual health screenings; 34 percent had counseling programs for troubled employees; 10 percent offered fitness programs; and 9 percent offered stop-smoking programs to their employees (Gorlin, 1981). Government leaders could help to publicize these efforts and, through various other means, act to encourage their development elsewhere.

RESEARCH NEEDS

It is only recently that attention has begun to focus on older workers. Most of the data on health needed to address worklife extension concerns was not collected nor analyzed for employment policy purposes in general, and for older worker policy purposes in particular. The very concept of the "working aged" is new to our contemporary cultural orientations. As a policy goal, it catches us ill-prepared informationally and ill-equipped structurally. Much needs to be learned if we are to proceed on this policy course in a better than haphazard manner.

This paper has presented information on the health status of older persons analyzed from the perspective of worklife extension concerns. This is only a first step toward providing health related information needed for older worker policy analyses. Further investigations in a number of areas are critically needed. These investigations fall under the general rubric of health, aging and work. This topic area incorporates a concern with the *impact of work on health,* both as experienced by the aged and as experienced in the course of the process of aging; and a concern with the *impact of health on work* as one ages and as one performs in older age. Needless to say, this study area is one of immense size.

Some of the discussions above highlighted areas where more research is needed in order to address better worklife extension considerations. These included research to develop a work potential rating index and the need to examine groups at risk of disability. Other areas needing study can be identified as well.

As noted previously, consideration of worklife extension issues raises questions about the relationship between health and labor supply, labor demand, productivity, health costs, and health maintenance of older workers. These topic areas need examination. More detailed information is required on topics such as:

—Health and the work potential of the aged.
—The impact of the health of older persons on employer health care and disability costs.
—The etiology of work disabilities among the aged.
—Health and labor force participation decisions.
—The relationship between work career structures and the presentation of disability.
—The impact of the health of older persons on employer demands for older workers.
—The role of workplace characteristics on the presentation of disabilities.
—The role of public policies in preventing or indirectly promoting work disabilities.
—The interaction between aging, health, work capacity and changing technology.
—The impact of retirement on health.
—The impact on health of continued labor force participation among the aged.
—The impact of older persons' health on their productivity and performance in the workplace.
—The impact of health promotion on productivity of older workers and on worklife expectancy.
—Methods of assessing the vocational capacity of older persons.
—Methods of matching older persons with health limitations to appropriate jobs; and
—Methods of accommodating workplace settings to the needs of impaired older workers.

Also needed is information on the health status of the older population under conditions of changing societal contexts. For example, has the health of the older population changed over time? Are older people healthier today than in the past? Information about trends in health patterns would aid policy formulations which will affect aged populations now and in the future. Some efforts have begun in this direction (Butler, 1983; Feldman, 1983; Fries, 1980; Gruenberg, 1977; and Manton, 1982), but much remains to be done.

Some of these investigations will require the collection of new data. Others call for a review, synthesis and analysis of existing information and data.

The above list is by no means exhaustive. Nor does it delineate the various specific research questions which follow from the topic areas identified. Furthermore, it must be recalled that health is but one variable affecting such complex phenomena as productivity and the supply of workers. The purpose of this listing is to begin to map out some of the more pressing information needs in the area of health, aging and work which are generated when worklife extension issues are raised. It is hoped that this undertaking will serve to stimulate interest, discussion and commitment to the pursuit of these and other related topics.

Table 38.
Reasons for Retirement, by Age, for Retired Persons 45 Years and Over: United States, 1978-79*

Retirement Reasons	Total Retired 45 Years and Over	45-54 Years	55-61 Years	62-64 Years	65-68 Years	69-74 Years	75 Years and Over
Population in the Thousands	11,403	558	1,224	1,223	2,326	3,009	3,063
	Percent Distribution						
Retired-Health	32.8	76.9	68.4	45.2	27.1	23.4	19.4
Retired-Other	67.2	23.1	31.7	54.9	72.9	76.6	80.6
Total**	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Table reports average annual estimates computed on a 2-year base using 1978 and 1979 data.
**Total may not add to 100% due to rounding.
Source: National Center for Health Statistics, unpublished data, 1982.

Chapter 5

SUMMARY AND CONCLUSIONS

The purpose of this paper was to present information about the health of older persons and to raise issues about the meaning and applicability of this information as it pertains to worklife extension concerns. This analysis was based on a review of literature on health, aging and work, and on a synthesis of data on health and aging.

This paper presents unpublished data on the health status of civilian noninstitutionalized middle-aged and older persons; of particular importance is the fact that these data are disaggregated so that narrow age differences within the older population can be observed. Moreover, in numerous cases, the data are broken out to reveal the health patterns of the cohorts for whom changes in the Social Security retirement age would be relevant: persons aged 62 to 64 and 65 to 68.

Analysis of the data revealed the following key findings:

(1) Health problems are more common among older persons (65-plus) compared to middle-aged persons (45 to 64); however, in several areas these differences are not pronounced.

(2) Health problems increase gradually across groups of increasing age; in numerous cases only small differences were found between adjacent age groups.

(3) Large numbers of middle-aged and older people are able-bodied, as indicated by the fact that the majority over age 45 report no functional limitations, no work disabilities, no hospital episodes during a 1-year period, and perceive their health as good or excellent.

(4) A sizable minority of the older population is functionally impaired. Thirty-one percent of the older population (45-plus) reported some level of impairment due to health (10 percent reported they were unable to work because of their health). For these persons, worklife extension may not be a viable alternative to retirement.

(5) Sixteen percent of older persons (45-plus) are partially impaired. For these persons, worklife extension may depend upon their ability to find suitable jobs. In other words, the extent to which a health problem becomes a work disability is dependent in part on the economy, and the availability and accessibility of jobs.

(6) Age 65 is not a threshold to dramatic changes in health patterns. Often, only small differences were found between adjacent age groups in the age range of 55 to 69 and 55 to 74 (those for whom worklife extention is particularly relevant). Moreover, in several instances the health pattern of persons aged 65 to 74 was more like the pattern of persons aged 45 to 64 than that of persons aged 75 and over.

(7) Health patterns differ by sex; women frequently reported more problems than men, regardless of age.

(8) Health patterns differ by race and ethnicity; minority group members often reported more problems than their White age peers.

Next, consideration of the data on health and aging within an extended worklife perspective brought forth the following issues:

(1) The need to develop a work potential rating scale appropriate for use on the older population. This scale would address issues of both employability (the functional capacity of the older population) and placeablilty (the availability of employment opportunities for those workers). It would help to identify the types of interventions needed if extended worklife is to be pursued.

(2) The need to address the problem of situational disability among the older population. The expression of disablility is dependent in part upon the availability, accessibility and structure of jobs. To the extent that older persons with health limitations can find suitable jobs, the threat of disability can be ameliorated.

(3) The need to identify and consider the needs of groups at risk of disability. Worklife extension is not a viable alternative for all older persons.

(4) The opportunity to combine with business in efforts to promote and maintain the health and functioning of workers. Some functional declines which accompany aging can be attributed to health behaviors rather than the process of aging itself. Health promotion activities promise opportunities to prevent or ameliorate functional declines.

Finally, the need for future research was discussed. As attention increasingly focuses on extension of the worklife, it is imperative that we learn more about health-work relations in regard to older populations. Further study is needed in order to facilitate the formulation of effective policies, and to help us as a society avoid policies which may serve to threaten health in old age. This committee print outlined areas where this work can begin.

APPENDIX

REFERENCES

Andrisani, Paul J. Effects of Health Problems on the Work Experience of Middle-aged Men. Industrial Gerontology 4(2) : 97–112, spring 1977.

Atchley, Robert C. The Social Forces in Later Life: An Introduction to Social Gerontology. Third Edition. Belmont, CA : Wadsworth Publishing Co., Inc., 1980.

Birren, J. E., R. N. Butler, S. W. Greenhouse, L. Sokoloff, and M. R. Yarrow. Human Aging: A Biological and Behavioral Study Washington, DC: U.S. Govt. Print. Off., 1963 (1971).

Blazer, D. C. and J. L. Houpt. Perception of Poor Health in the Healthy Older Adult. Journal of the American Geriatrics Society. 1979, 27:330–334.

Chirikos, Thomas N., and Gilbert Nestel. Impairment and Labor Market Outcomes: a Cross-Sectional and Longitudinal Analysis. Work and Retirement, Cambridge, MA: MIT Press, 1981.

Dunn, Dennis J. Vocational Rehabilitation of the Older Disabled Worker. Journal of Rehabilitation 47(4): 76–81, 1981.

Feingold, S. Norman. The Vocational Expert in the Social Security Disability Program. Springfield, IL: Charles C. Thomas, 1969.

Feldman, Jacob J. Work Ability of the Aged Under Conditions of Improving Mortality. Milbank Memorial Fund Quarterly/ Health and Society. 61:430–44, 1983.

Feller, Barbara A. Prevalence, of Selected Impairments. United States, 1977. Vital and Health Statistics. Series 10, No. 134. National Center for Health Statistics. Washington, DC: U.S. Govt. Print. Off., 1981.

Fillenbaum, G. G. Social Context and Self-Assessments of Health among the Elderly. Journal of Health and Social Behavior. 1979, 20(1): 45–51.

Fries, James F. Aging, Natural Death, and the Compression of Morbidity. The New England Journal of Medicine. 303(3): 130–135, 1980

Garrity, T. F. Social Involvement and Activeness as Predictors of Morale Six Months After First Myocardial Infarction. Social Science and Medicine. 1973, 7:199–207.

Garrity, T. F. Vocational Adjustment After First Myocardial Infarction; Comparative Assessment of Several Variables Suggested in the Literature. Social Science and Medicine. 1973a, 7:705–717.

Gorlin, Harriet. Personnel Practices III: Employee Services, Work Rules. Information Bulletin. No. 95, New York, NY: The Conference Board, 1981.

Great Britain General Register Office. The Survey of Sickness 1943-52. Studies of Medical and Population Subjects, No. 12. London: H. M. Stationery Office, 1957.

Greenberg, Herbert M., and Jeanne Greenberg. Job Matching for Better Sales Performance. Harvard Business Review. 1980, 58 (5): 128-133.

Gruenberg, Ernest M. The Failure of Success. Milbank Memorial Fund Quarterly/Health and Society. 55(1): 3-24, 1977.

Institute of Medicine. Airline Pilot Age, Health, and Performance. Washington, DC: National Academy Press, 1981.

Jack, Susan S. Current Estimates From the National Health Interview Survey: United States, 1980. Vital and Health Statistics. Series 10, No 139. National Center for Health Statistics. Washington, U.S. Govt. Print. Off., 1981.

Jaffe, A. J., Lincoln H. Day, and Walter Adams. Disabled Workers in the Labor Market. Totowa, NJ: The Bedminster Press, 1964.

Jette, Alan M. Health Status Indicators: Their Utility in Chronic Disease Evaluation Research. Journal of Chronic Diseases. 1980, 33:567-579.

Kaplan, G. A., and T. Camacho. Perceived Health and Mortality: A Nine-Year Followup of the Human Population Laboratory Cohort. American Journal of Epidemiology. 117: 292-304, 1983.

Kelleher, Carol H., and Daniel A. Quirk. Age, Functional Capacity and Work: An Annolated Bibliography. Industrial Gerontology. 19, fall 1973.

Kingson, Eric R. The Early Retirement Myth: Why Men Retire Before Age 62. Report prepared for the Select Committee on Aging, U.S. House of Representatives. Washington, DC: U.S. Govt. Print. Off., 1981.

Kingson, Eric R. The Health of Very Early Retirees. Aging and Work. 4(1): 11-12, 1981a.

Kingson, Eric R. Critique of Early Retirement Study Disputed. Aging and Work. 5(2): 93-110, 1982.

Kingson, Eric R. Still More on Early Retirement. Aging and Work. 6(2): 111-115, 1983.

Kovar, Mary Grace. Elderly People: The Population 65 Years and Over. In Health. United States, 1976-77. Washington, DC: U.S. Govt. Print. Off., 1977, pp. 3-26.

Koyl, Leon F. Employing the Older Worker: Matching the Employee to the Job. Washington, DC.: The National Council on Aging, Inc., 1974.

Lando, Mordechai E., Malcolm B. Coate, and Ruth Kraus. Disability Benefit Applications and the Ecomony. Social Security Bulletin. 1979, 42(10): 3-10.

Lando, Mordechai E., Richard R. Cutler, and Edward Gamber. 1978 Survey of Disability and Work. Date Book. U.S. Department of Health and Human Services, Social Security Administration. Washington, U.S. Govt. Print. Off., 1982.

LaRue, Asenath, Lew Bank, Lissy Jarvik, and Monte Hetland. Health in Old Age: How Do Physicians' Ratings and Self-ratings Compare? Journal of Gerontology. 1979, 34(5): 687-691.

Madans, Jennifer, H. Long-Term Care for the Elderly in Five States. In Health. United States 1981. U.S. Department of

Health and Human Services. Washington, U.S. Govt. Print. Off., 1981, pp. 47–53.

Maddox, G.L. and E.B. Douglass. Self-Assessment of Health: A Longitudinal Study of Elderly Subjects. Journal of Health and Social Behavior. 1973, 14:89–93.

Manton, Kenneth G. Changing Concepts of Morbidity and Morality in the Elderly Population. Milbank Memorial Fund Quarterly/Health and Society. 60(2): 183–244. 1982.

Matheson, Leonard N. "Rehabilitation of the Older Worker." Pre-Conference Training Session, National Rehabilitation Association Annual Meeting. Anaheim, CA. September 19, 1982.

Meier, Elizabeth L. and Elizabeth A. Kerr. Capabilities of Middle-Aged and Older Workers: A Survey of the Literature. Industrial Gerontology. 3(3): 147–156.

Mosher, John. Vocational Rehabilitation; Employment; Self-Employment: B. Employment and Job Placement. In Robert M. Goldenson (Ed.), Disability and Rehabilitation Handbook. New York: McGraw-Hill, 1978, pp. 71–85.

Mossey, Jana M. and Evelyn Shapiro. Self-Rated Health: A Predictor of Mortality Among the Elderly. American Journal of Public Health. 1982, 72(8):800–808.

Mund, Seymour. Vocational Rehabilitation; Employment; Self-Employment: A. Vocational Rehabilitation Process. In Robert M. Goldenson (Ed.), Disability and Rehabilitation Handbook. New York: McGraw-Hill, 1978 pp. 67–71.

Myers, Robert J. Why Do People Retire from Work Early? Social Security Bulletin 45(9): 10–14, 1982.

Myers, Robert J. More About the Controversy on Early Retirement Study. Aging Work. 6(2): 105–109, 1983.

National Center for Health Statistics. Current Estimates from the National Health Interview Survey. Vital and Health Statistics. Series 10, No. 141, 1982.

National Center for Health Statistics. Personal Communication with staff in the Division of Health Interview Statistics, Washington, DC, 1982a.

National Center for Health Statistics. Health Survey Procedure, Concepts, Questionnaire Development, and Definitions in the Health Interview Survey. Vital and Health Statistics. Series 1, No. 2, Washington, DC: U.S. Govt. Print. Off. 1964.

National Center for Health Statistics. Origin, Program, and Operation of the U.S. National Health Survey, Vital and Health Statistics. Series 1, No. 2, Washington, DC: U.S. Govt. Print. Off. 1963.

National Council on the Aging, Inc. Aging in the Eighties: America in Transition. Survey Highlights and Fact Sheets, 1981.

Palmore, E. (Ed.). Normal Aging: Report from the Duke Longitudinal Study, 1955–1969. Durham, NC: Duke University Press, 1970.

Palmore, E. (Ed.). Normal Aging II: Reports from the Duke Longitudinal Studies, 1970–1973. Durham, NC: Duke University Press, 1974.

Parnes, Herbert S. and Gilbert Nestel. Early Retirement. In the Pre-Retirement Years (Vol. 4), A Longitudinal Study of the Labor Market Experience of Men. By Herbert S. Parnes, Arvil

V. Adams, Paul J. Andrisani, Andrew I. Kohen, and Gilbert Nestel. Washington, U.S. Govt. Print. Off., 1975, pp. 153-196.

Reno, Virginia. Why Men Stop Working At or Before Age 65. In Reaching Retirement Age. Baltimore: U.S. Social Security Administration, 1976.

Robinson, P. K. and M. J. Sanford. The Availability of Older Workers to the Labor Market. Employment and Retirement Division, Andrus Gerontology Center, University of Southern California, Los Angeles, CA, 1982.

Schwab, Karen. Early Labor Force Withdrawal of Men: Participants and Non-Participants Aged 58-63. In Almost 65; Baseline Data from the Retirement History Study. Baltimore: U.S. Social Security Administration, 1976, pp. 43-56.

Shock, N. W. The Physiology of Aging. Science American. 1970, 206:100. Physiologic Aspects of Aging. Journal of the American Dietetic Association. 56:491.

Shock, N. W. and R. Adres. In Adaptive Capacities of an Aging Organism. Ed. D.F. Chebotarev, Kiev, USSR: Academic Science, 1968, pp. 235-254.

Sigerist, H.E. Medicine and Human Welfare. New Haven: Yale University Press, 1971.

Slater, P. Survey of Sickness, October 1943 to December 1945. London: U.K. Ministry of Health, August 1946, mimeo.

Social Security Administration. 1978 Survey of Disability and Work, Databook, Preliminary Edition. Washington, DC: U.S. Govt. Print. Off., 1982.

Sullivan, Daniel F. Conceptual Problems in Developing an Index of Health. Vital and Health Statistics. Series 2, No. 17. Washington, DC: U.S. Govt. Print. Off., 1966.

Thompson, Doris M. The Company and the Physically Impaired Worker. Conference Board Reports, Studies in Personnel Policy. No. 163. New York, NY: National Industrial Conference Board, Inc., 1957.

Tissue, T. Another Look at Self-rated Health Among the Elderly. Journal of Gerontology. 1972, 27:91-94.

U.S. Department of Health and Human Services. An Inventory of Research on Income Support for the Disabled. (Preliminary Version). Staff working paper developed by the Office of the Assistant Secretary for Planning and Evaluation, 1981.

U.S. Department of Labor. The Older American Workers: Age Discrimination in Employment, Research Materials. Report of the Secretary of Labor to the Congress under Section 715 of the Civil Rights Act of 1964. Washington, DC: U.S. Govt. Print. Off., 1965.

Weg, Ruth B. Changing Physiology of Aging: Normal and Pathological. In Aging: Scientific Perspectives and Social Issues. Diana S. Woodruff and James E. Birren (Eds.). New York: Van Nostrand Co., 1975.

Wolinsky, Fredric D., Rodney M. Coe, Douglas K. Miller, and John M. Prendergast. Measurement of the Global and Functional Dimensions of Health Status in the Elderly. Journal of Gerontology. 39(1):88-92, 1984.

World Health Organization. The First Ten Years of the World Health Organization. Geneva: World Health Organization, 1958.